

UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

GEOLOGICAL SURVEY

Charles G. Groat, Director

For additional information write to:
District Chief, Water Resources Division
U.S. Geological Survey
8027 Exchange Dr.
Austin, Texas 78754-4733

1999

PREFACE

This edition of the annual hydrologic data report of Texas is one of a series of annual reports that document hydrologic data collected from the U.S. Geological Survey's collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by Federal, State, local agencies, and the private sector for developing and managing land and water resources in Texas which are contained in 4 volumes:

- Volume 1. Arkansas River Basin, Red River Basin, Sabine River Basin, Neches River Basin, Trinity River Basin, and Intervening Coastal Basins
- Volume 2. San Jacinto River Basin, Brazos River Basin, San Bernard River Basin, and Intervening Coastal Basins
- Volume 3. Colorado River Basin, Lavaca River Basin, Guadalupe River Basin, Nueces River Basin, Rio Grande Basin, and Intervening Coastal Basins
- Volume 4. Ground-Water Data

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had the primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, most of the data were collected, computed, and processed from Subdistrict and Field Offices. The following supervised the collection, processing, and tabulation of the data:

Stanley Baldys	Edna M. Paul
Laura S. Coplin	George B. Ozuna
Mike E. Dorsey	Roberto Perez
Addis M. Miller III	J.M. Taylor
Jimmy G. Pond	Ken VanZandt

The following individuals contributed to the collection, processing and preparation of the data:

Houston Subdistrict Office

Cindy Billington	David Hixon
Jacqueline Braden	Jim S. Hutchison
Dexter W. Brown	Patrick O. Keefe
J. Pat Bruchmiller	Fred Liscum
Mike R. Burnich	Dale Melton
Al Campodonico	S. Lyle Phipps
Jeff W. East	Cervando S. Ramirez
Debra Sneck-Fahrer	Horatio X. Santos
Lee B. Goldstein	

Fort Worth Field Office

Patrick B. Allen	Marilyn J. Kuhn
Jack D. Benton	Bradley L. Mansfield
Ben J. Carr	Darryl G. Pinion
Martin J. Danz	Jeffery T. Sandlin
Judith H. Donohue	Clyde T. Schoultz
Bruce R. Goddard	David V. Tudor
Vernon L. Hastings	

Austin Field Office

Searcy M. Jacobs	Keith R. Snider
Milton M. Miller	Randy A. Samuelson
Venezia Muniz	Milton W. Sunvison
C.E. Ranzau	K. Craig Weiss

San Antonio Subdistrict Office

James M. Briers	Michael Nyman
Allan K. Clark	Cassi L. Otero
Allen L. Furlow	Joan T. Patton
Jon R. Gilhousen	Jorge O. Pena
Patricia B. Ging	Brian L. Petri
Ken C. Grimm	Roel Reyna
C.A. Hartmann, Jr.	Richard N. Slattery
Stephanie Marr	John A. Tomlinson
Cecillo R. Martinez	John F. Wojcik
Vidal Mendoza	

Wichita Falls Field Office

Paul Bennett	G. Dan McElhany
W.C. Damschen	Anita M. Ross

San Angelo Field Office

Hector H. Garza	James B. Schiller
Henry Jacques, Jr.	Tim E. Teagarden
Lawanna M. Kiser	

This report was prepared in cooperation with the State of Texas and other agencies under the supervision of Richard O. Hawkinson, District Chief.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY <i>(Leave blank)</i>	2. REPORT DATE April 1999	3. REPORT TYPE AND DATES COVERED Annual--Oct. 1, 1997 to Sept. 30, 1998	
4. TITLE AND SUBTITLE Water Resources Data--Texas, Water Year 1997, Volume 2 San Jacinto River, Brazos River, San Bernard River Basins and Intervening Coastal Basins			5. FUNDING NUMBERS
6. AUTHOR(S) S.C. Gandara, W.J. Gibbons, F.L. Andrews, and D.L. Barbie			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division Texas District 8011 Cameron Road, Bldg. 1 Austin, TX 78754-3898			8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-TX-98-2
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division Texas District 8027 Exchange Dr. Austin, TX 78754-4733			10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-TX-98-2
11. SUPPLEMENTARY NOTES Prepared in cooperation with Federal, State, and local agencies.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT No restriction on distribution. This report may be purchased from National Technical Information Service Springfield, VA 22161			12b. DISTRIBUTION CODE
13. ABSTRACT <i>(Maximum 200 words)</i> Water-resources data for the 1998 water year for Texas are presented in four volumes, and consist of records of stage, discharge, and water quality of streams and canals; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. Volume 2 contains records for water discharge at 74 gaging stations; stage only at 9 gaging stations; stage and contents at 21 lakes and reservoirs; water quality at 32 gaging stations; and data for 73 partial-record stations comprised of 43 flood-hydrograph, 9 low-flow, and 16 crest-stage, and 5 miscellaneous stations. Also included are lists of discontinued surface-water discharge or stage-only stations and discontinued surface-water-quality stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Federal, State, and local agencies in Texas. Records for a few pertinent stations in the bordering States also are included.			
14. SUBJECT TERMS *Texas, *hydrologic data, *surface water, *water quality, flow rate, gaging stations, lakes, reservoirs, chemical analyses, sediments, water temperature, sampling sites.			15. NUMBER OF PAGES 338
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT Unclassified

CONTENTS

	Page
Preface	iii
List of gaging stations, in downstream order, for which records are published	vi
List of discontinued surface-water discharge or stage-only stations	ix
List of discontinued surface-water-quality stations	xi
Introduction	1
Cooperation.....	2
Hydrologic conditions	2
Streamflow	2
Water quality	5
Special networks and programs.....	6
Explanation of the records.....	7
Station identification numbers	7
Downstream order numbering	7
Records of stage and water discharge	7
Data collection and computation	7
Data presentation	8
Station manuscript	8
Data table of daily mean values	9
Statistics of monthly mean data	10
Summary statistics	10
Identifying estimated daily discharge	11
Accuracy of the records	11
Other records available	11
Records of surface-water quality	11
Classification of records	12
Arrangement of records	12
On-site measurements and sample collection	12
Water temperature	13
Sediment	13
Laboratory measurements	13
Data presentation	13
Remarks codes	14
Water Quality-Control Data	15
Access to USGS Water Data	15
Definition of terms	16
Publications of techniques of water-resources investigations	22
Gaging-station records	25
Discharge at partial-record stations and miscellaneous sites	315
Low-flow partial-record stations	315
Crest-stage partial-record stations	317
Miscellaneous partial-record stations	319
Index	321

ILLUSTRATIONS

Figure 1. Area of Texas covered by volume 2 and location of selected streamflow and water-quality stations in volume 2.	3
2. Monthly mean discharges at four long-term hydrologic index stations during 1998 water year and median of the monthly mean discharges for 1961-90 water years.	4

TABLES

Table 1. Streamflow at six selected stations	5
--	---

GAGING STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Type of data collected: (d) discharge; (c) chemical; (b) biological; (t) water temperature;
(s) sediment; (e) elevation, gage heights, or contents.]

	Station number	Page
WESTERN GULF OF MEXICO BASINS		
SAN JACINTO RIVER BASIN		
West Fork San Jacinto River:		
Lake Conroe near Conroe (e) (c) (t) -----	08067600	25
West Fork San Jacinto River below Lake Conroe near Conroe (d) -----	08067650	32
West Fork San Jacinto River near Conroe (d) -----	08068000	34
West Fork San Jacinto River above Lake Houston near Porter (d) (c) (b) (t) -----	08068090	36
Spring Creek near Spring (d) (c) (b) (t) -----	08068500	38
Cypress Creek at Katy-Hockley Road near Hockley (d) -----	08068720	41
Cypress Creek at House and Hahl Road near Cypress (d) -----	08068740	42
Little Cypress Creek near Cypress (d) -----	08068780	43
Cypress Creek at Grant Road near Cypress (d) -----	08068800	44
Cypress Creek at Stuebner Airline Road near Westfield (d) -----	08068900	45
Cypress Creek near Westfield (d) (c) (b) (t) -----	08069000	46
East Fork San Jacinto River near Cleveland (d) -----	08070000	49
East Fork San Jacinto River near New Caney (d) (c) (b) (t) -----	08070200	51
Caney Creek near Splendora (d) (c) (b) (t) -----	08070500	58
San Jacinto River:		
Luce Bayou above Lake Houston near Huffman (d) (c) (b) (t) -----	08071280	61
Lake Houston near Sheldon (e) (c) (b) (t) -----	08072000	63
San Jacinto River near Sheldon (e) -----	08072050	74
Buffalo Bayou near Katy (d) -----	08072300	76
Barker Reservoir near Addicks (e) -----	08072500	77
South Mayde Creek:		
Bear Creek near Barker (d) -----	08072730	78
Langham Creek at West Little York Road near Addicks (d) -----	08072760	80
Addicks Reservoir near Addicks (e) -----	08073000	81
Buffalo Bayou near Addicks (d) -----	08073500	82
Buffalo Bayou at West Belt Drive, Houston (d) (c) (t) -----	08073600	83
Buffalo Bayou at Piney Point (d) -----	08073700	87
Buffalo Bayou at Houston (d) (t) -----	08074000	88
Whiteoak Bayou:		
Cole Creek at Deihl Road, Houston (d) -----	08074150	94
Brickhouse Gulley at Costa Rica Street, Houston (d) -----	08074250	95
Whiteoak Bayou at Houston (d) (c) (b) (t) -----	08074500	96
Whiteoak Bayou at Main Street, Houston (e) -----	08074598	100
Buffalo Bayou at McKee Street, Houston (e) (c) (t) -----	08074610	102
Buffalo Bayou at Turning Basin, Houston (e) (c) (t) -----	08074710	109
Brays Bayou:		
Keegans Bayou at Roark Road near Houston (d) -----	08074800	116
Brays Bayou at Houston (d) (c) (b) (t) -----	08075000	117
Sims Bayou at Hiram Clarke Street, Houston (d) -----	08075400	121
Sims Bayou at Houston (d) (c) (b) (t) -----	08075500	123
Berry Bayou at Forest Oaks Street, Houston (e) -----	08075650	126
Vince Bayou at Pasadena (d) -----	08075730	128
Hunting Bayou at Interstate Highway 610, Houston (d) (c) (b) (t) -----	08075770	129
Greens Bayou near U.S. Highway 75 near Houston (d) -----	08075900	133
Greens Bayou near Houston (d) (c) (b) (t) -----	08076000	134
Garners Bayou near Humble (d) -----	08076180	138
Halls Bayou at Houston (d) -----	08076500	139
Greens Bayou at Ley Road, Houston (d) -----	08076700	140
CLEAR CREEK BASIN		
Clear Creek near Friendswood (d) -----	08077600	141
COASTAL BASIN		
Moses Lake-Galveston Bay near Texas City (e) -----	08077650	142
HIGHLAND BAYOU BASIN		
Highland Bayou Diversion Channel near Hitchcock (e) -----	08077690	144
Highland Bayou near Hitchcock (e) -----	08077695	145
LaMarque Levee Pump Station near LaMarque (e) -----	08077740	146

GAGING STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

vii

	Station number	Page
WESTERN GULF OF MEXICO BASINS--Continued		
CHOCOLATE BAYOU BASIN		
Chocolate Bayou near Alvin (d) -----	08078000	149
BRAZOS RIVER BASIN		
Double Mountain Fork Brazos River (head of Brazos River):		
Double Mountain Fork Brazos River at Justiceburg (d) (c) (t) -----	08079600	151
Lake Alan Henry Reservoir near Justiceburg (e) -----	08079700	156
Double Mountain Fork Brazos River near Aspermont (d) (c) (t) -----	08080500	157
Salt Fork Brazos River near Aspermont (d) -----	08082000	160
Brazos River:		
Brazos River at Seymour (d) (c) (t) -----	08082500	162
Millers Creek near Munday (d) -----	08082700	165
Clear Fork Brazos River near Roby (d) -----	08083100	166
Clear Fork Brazos River at Nugent (d) -----	08084000	167
Paint Creek:		
California Creek near Stamford (d) -----	08084800	169
Clear Fork Brazos River at Fort Griffin (d) -----	08085500	171
Hubbard Creek below Albany (d) (c) (t) -----	08086212	173
Big Sandy Creek above Breckenridge (d) (c) (t) -----	08086290	180
Hubbard Creek Reservoir near Breckenridge (e) (c) (t) -----	08086400	187
Brazos River near South Bend (d) -----	08088000	194
Salt Creek:		
Lake Graham near Graham (e) -----	08088400	196
Possum Kingdom Lake near Graford (e) -----	08088500	197
Brazos River near Graford (d) -----	08088610	198
Brazos River near Palo Pinto (d) -----	08089000	199
Brazos River near Dennis (d) -----	08090800	201
Lake Granbury near Granbury (e) -----	08090900	202
Brazos River near Glen Rose (d) -----	08091000	203
Paluxy River at Glen Rose (d) -----	08091500	205
Squaw Creek Reservoir near Glen Rose (e) -----	08091730	207
Squaw Creek near Glen Rose (d) -----	08091750	208
Nolan River at Blum (d) -----	08092000	210
Lake Whitney near Whitney (e) -----	08092500	211
Brazos River near Aquilla (d) -----	08093100	212
Aquilla Lake above Aquilla (e) -----	08093350	214
Aquilla Creek near Aquilla (d) -----	08093500	215
North Bosque River at Hico (d) -----	08094800	217
North Bosque River near Clifton (d) -----	08095000	218
North Bosque River at Valley Mills (d) (c) (t) -----	08095200	220
South Bosque River:		
Middle Bosque River near McGregor (d) (c) (t) -----	08095300	224
Hog Creek near Crawford (d) -----	08095400	227
Waco Lake near Waco (e) (c) (b) (t) -----	08095550	228
Bosque River near Waco (c) (t) -----	08095600	239
Brazos River at Waco (d) -----	08096500	240
Brazos River near Highbank (d) -----	08098290	242
Leon River near De Leon (d) -----	08099100	243
Sabana River near De Leon (d) -----	08099300	244
Proctor Lake near Proctor (e) -----	08099400	245
Leon River near Hamilton (d) -----	08100000	246
Leon River at Gatesville (d) -----	08100500	247
Leon River at North Fort Hood (c) (t) -----	08100600	249
Cowhouse Creek at Pidcoke (d) (c) (t) -----	08101000	251
Belton Lake near Belton (e) (c) (b) (t) -----	08102000	255
Leon River near Belton (d) (c) (t) -----	08102500	270
Lampasas River near Kempner (d) -----	08103800	273
Rocky Creek:		
South Fork Rocky Creek near Briggs (d) -----	08103900	275
Stillhouse Hollow Lake near Belton (e) -----	08104050	276
Little River near Little River (d) -----	08104500	277

GAGING STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station number	Page
WESTERN GULF OF MEXICO BASINS--Continued		
BRAZOS RIVER BASIN--Continued		
Brazos River:		
Little River:		
San Gabriel River:		
Lake Georgetown near Georgetown (e) -----	08104650	279
North Fork San Gabriel River near Georgetown (d) -----	08104700	280
South Fork San Gabriel River at Georgetown (d) -----	08104900	282
Berry Creek near Georgetown (d) -----	08105100	283
Granger Lake near Granger (e) -----	08105600	285
San Gabriel River at Laneport (d) -----	08105700	286
Little River near Rockdale (d) -----	08106350	288
Little River at Cameron (d) -----	08106500	289
Brazos River at State Highway 21 near Bryan (d) -----	08108700	291
Middle Yegua Creek (head of Yegua Creek) near Dime Box (d) -----	08109700	292
East Yegua Creek near Dime Box (d) -----	08109800	293
Somerville Lake near Somerville (e) -----	08109900	295
Davidson Creek near Lyons (d) -----	08110100	296
Navasota River above Groesbeck (d) -----	08110325	297
Big Creek near Freestone (d) -----	08110430	298
Lake Limestone near Marquez (e) -----	08110470	299
Navasota River near Easterly (d) -----	08110500	300
Navasota River at OSR near Bryan (d) -----	08110800	302
Brazos River near Hempstead (d) -----	08111500	303
Brazos River at Richmond (d) (c) (t) -----	08114000	305
Big Creek near Needville (d) -----	08115000	308
Brazos River near Rosharon (d) -----	08116650	310
SAN BERNARD RIVER BASIN		
San Bernard River near Boling (d) -----	08117500	312

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Texas have been discontinued. Daily stream-flow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as partial-record stations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the title page of this report.

[Letters after station name designate the type of data collected: (d) discharge, (e) elevation (stage only).]

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Goose Creek near McNair (e)	08067520	6.7	1963-65,
Welch Branch near Huntsville (e)	08067550	2.35	1965-74
Lake Conroe near Montgomery (e)	08067580	445	1973-76
Lake Conroe at Outflow Weir near Conroe (d)	08067610	445	1974, 1977-89
Caney Creek near Dobbin (d)	08067700	40.40	1963-65
Landrum Creek Tributary near Montgomery (e)	08067750	0.13	1965-74
Lake Creek near Conroe (e)	08067900	291	1969-89
West Fork San Jacinto River near Porter (e)	08068100	970	1970-76
Mill Creek Tributary near Dobbin (e)	08068300	4.07	1967-73
Panther Branch near Conroe (e)	08068400	25.9	1974-76, 1980-88
Swale No. 8 at Woodlands (e)	08068438	0.55	1975-76, 1980-88
Panther Branch near Spring (e)	08068450	34.5	1972-76, 1980-88
Spring Creek at Spring (d)	08068520	419	1975-95
Spring Creek near Humble (e)	08068600	435	1971-76
Cypress Creek at Sharp Road near Hockley (d)	08068700	80.7	1975-85
Cypress Creek near Cypress (e)	08068750*	138	1971-76
Little Cypress Creek near Cypress (d)	08068780*	41.0	1983-92
Cypress Creek at Grant Road near Houston (d)	08068800*	214	1983-92
Cypress Creek at Stuebner-Airline Road near Westfield (d)	08068900*	248	1982-87
Cypress Creek near Humble (e)	08069200	319	1971-76
West Fork San Jacinto River near Humble (d)	08069500	1,741	1929-54
Bear Creek near Cleveland (e)	08069850	1.46	1967-73
Caney Creek near New Caney (e)	08070600	178	1970-76
Peach Creek at Splendor (d)	08071000	117	1944-77
Peach Creek near New Caney (e)	08071100	155	1970-76
Tarkington Bayou near Dayton (e)	08071200	142	1964-76
Luce Bayou near Huffman (e)	08071300	226	1971-76
San Jacinto River near Huffman (d)	08071500	2,800	1937-53
Buffalo Bayou at Clodine (e)	08072400	84.2	1974-85
Langham Creek at West Little York Road, Addicks (d)	08072760*	25.0	1977-85
Bettina Street Ditch at Houston (e)	08073630	1.37	1979-85
Stony Brook Street Ditch at Houston (e)	08073750	0.50	1967-72
Bering Ditch at Woodway Drive, Houston (e)	08073800	2.77	1965-73
Cole Creek at Guhn Road at Houston (e)	08074100	7.05	1964-72
Bingle Road Storm Sewer at (e)	08074145	0.21	1980-88
Cole Creek at Deihl Road at Houston ((d)	08074150*	7.50	1964-86
Brickhouse Gully at Clarblak Street at Houston (e)	08074200	2.56	1965-83
Brickhouse Gully at Costa Rica Street at Houston (d)	08074250*	11.4	1964-81
Lazybrook Street Storm Sewer, Houston (e)	08074400	0.13	1978-88
Little Whiteoak Bayou at Trimble Street, Houston (e)	08074540	18.0	1980-84
Little White Oak Bayou at Houston (e)	08074550	20.9	1971-79
Buffalo Bayou at Main St., Houston (d)	08074600*	469	1962-94
Buffalo Bayou at 69th Street, Houston (e)	08074700	476	1961-86
Brays Bayou at Addicks-Clodine Rd., Houston (e)	08074750	0.87	1974-77
Brays Bayou at Alief Road, Alief (e)	08074760*	12.9	1977-85
Keegans Bayou at Keegans Road near Houston (e)	08074780*	7.47	1964-71
Keegans Bayou at Roark Road near Houston (d)	08074800*	13.0	1964-85
Binliff Ditch at Bissonnet Street, Houston (e)	08074850	4.38	1968-82
Willow Waterhole Bayou at Landsdowne Street, Houston (e)	08074900	3.81	1965-72
Hummingbird Street Ditch at Mullins Street, Houston (e)	08074910	0.32	1979-84
Brays Bayou at Scott Street, Houston (e)	08075100	106	1971-81
Sims Bayou at Carlsbad Street, Houston (e)	08075300	3.81	1964-72
Sims Bayou at MLK Blvd., Houston (e)	08075470	48.4	1978-89
Berry Bayou at Gilpin Street, Houston (e)	08075550	2.87	1965-84

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Berry Bayou Tributary at Globe Street, Houston (e)	08075600	1.58	1965-72
Berry Bayou at Forest Oaks Street, Houston (e)	08075650*	10.7	1968-82
Berry Bayou at Galveston Road, Houston (e)	08075700	4.86	1965-72
Huntington Bayou Tributary at Cavalcade Street, Houston (e)	08075750	1.20	1965-72
Huntington Bayou at Falls Street, Houston (e)	08075760	2.75	1964-84
Halls Bayou at Deertrail Street at Houston (e)	08076200	8.69	1965-84
Carpenters Bayou at Cloverleaf (e)	08076900	25.8	1964, 1971-93
Clear Creek near Pearland (d)	08077000	38.8	1944-45, 1946-60, 1963-94
Clear Creek Tributary at Hall Road, Houston (e)	08077100	1.31	1965-86
Clear Creek at Friendswood (d)	08077540	99.6	1994-97
Cowart Creek near Friendswood (e)	08077550	18	1965-74
Clear Creek near Friendswood (e)	08077600	126	1966-94
Armand Bayou near Genoa (e)	08077620	18.2	1968, 1971-73
Highland Bayou at Hitchcock (e)	08077700	15.6	1963-82
Highland Bayou Tributary near Texas City (e)	08077750	1.97	1966-73
Highland Bayou near Texas City (e)	08077780	20.8	1965-88
Flores Bayou near Danbury (e)	08078700	23.3	1967-72
Oyster Creek near Angleton (d)	08079000	171	1945-80
North Fork Double Mountain Fork Brazos River at Lubbock (d)	08079500	5,300	1940-49, 1971-72
North Fork Double Mountain Fork Brazos River above Buffalo Springs nr Lubbock (e)	08079530	29.3	1952-54, 1957, 1962, 1967-76
Buffalo Springs Lake near Lubbock (e)	08079550	236	1967-77
Barnum Springs Draw near Post (e)	08079570	4.99	1965-73
North Fork Double Mountain Fork Brazos River near Post (d)	08079575	438	1984-93
Rattlesnake Creek near Post (e)	08079580	2.75	1966-74
Double Mountain Fork Brazos River near Rotan (d)	08080000	8,536	1950-51
Guest-Flowers Draw near Aspermont (e)	08080510	3.02	1965-74
McDonald Creek near Post (d)	08080540	103	1966-78
Running Water Draw at Plainview (d)	08080700	1,291	1939-53, 1957-78
Callahan Draw near Lockney (e)	08080750	37.5	1966-77
White River near Crosbytown (e)	08080800	529	1951-64
White River below falls near Crosbytown (e)	08080900	529	1951-64
White River Reservoir near Spur (e)	08080910	689	1965-76
Salt Fork Brazos River at Farm Road 1081 near Clairemont (e)	08080916	1,135	1968-77
Red Mud Creek near Spur (e)	08080918	65.1	1967-74
Salt Fork Brazos River at State Highway 208 near Clairemont (e)	08080940	1,357	1968-77
Duck Creek near Girard (d)	08080950	431	1965-89
Salt Fork Brazos River at U.S. Highway 380 near Jayton (e)	08080959	1,797	1968-77
Salt Fork Brazos River near Peacock (d)	08081000	4,619	1950-51, 1965-86
Short Croton Creek at mouth near Jayton (e)	08081050	18.1	1959-82
Croton Creek below Short Croton Creek near Jayton (e)	08081100	250	1959-82
Croton Creek near Jayton (d)	08081200	290	1959-86
Salt Croton Creek at Weir D near Aspermont (e)	08081400	55.5	1957-76
Haystack Creek at Weir E near Aspermont (e)	08081450	15.1	1957-77
Salt Croton Creek near Aspermont (d)	08081500	64.30	1957-77
Stinking Creek near Aspermont (d)	08082100	88.80	1966-83
North Croton Creek near Knox City (d)	08082180	251	1965-86
Millers Creek Reservoir near Bomartin (d)	08082800	240	1975-94
North Elm Creek near Throckmorton (e)	08082900	3.58	1965-77
Elm Creek near Proffitt (e)	08082950	275	1969-85
Brazos River near Graham (d)	08083000	16,830	1916-20
Lake Sweetwater near Sweetwater (e)	08083200	104	1937-74

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Clear Fork Brazos River at Hawley (d)	08083240	1,416	1968-89
Mulberry Creek near Hawley (d)	08083245	205	1968-89
Elm Creek near Abilene (d)	08083300	133	1964-79
Little Elm Creek near Abilene (d)	08083400	39.10	1964-79
Cat Claw Creek at Abilene (d)	08083420*	13	1971-79
Elm Creek at Abilene (d)	08083430	422	1980-83
Cedar Creek at Abilene (d)	08083470	119	1971-84
Fort Phantom Hill Reservoir near Nugent (e)	08083500	470	1940-85
Lake Stamford near Hoskell (e)	08084500	368	1953-86
Paint Creek near Haskell (d)	08085000	914	1950-51
Humphries Draw near Haskell (e)	08085300	3.51	1965-77
Clear Fork Brazos River at Crystall Falls (d)	08086000	4,323	1922-29
Hubbard Creek near Sedwick (d)	08086015	128	1964-66
Hubbard Creek at Highway 380 near Moran (e)	08086020	152	1963-76
Deep Creek near Putnam (e)	08086030	33.8	1963-66
Brushy Creek near Putnam (e)	08086040	27.6	1963-66
Mexia Creek near Putnam (e)	08086045	67.0	1963-66
Deep Creek at Moran (d)	08086050	228	1963-75
Hubbard Creek near Albany (d)	08086100	454	1962-75
Salt Prong Hubbard Creek below Lake McCarty near Albany (e)	08086110	45.5	1963-66
Salt Prong Hubbard Creek at U.S. 380 near Albany (d)	08086120	61	1964-68
Cook Creek near Albany (e)	08086130	11.3	1963-76
North Fork Hubbard Creek near Albany (d)	08086150	39.3	1963-90
Salt Prong Hubbard Creek near Albany (d)	08086200	115	1962-63
Snailum Creek near Albany (d)	08086210	22.90	1964-66
Big Sandy Creek near Eolian (e)	08086220	91.4	1963-76
Battle Creek near Putnam (e)	08086230	32.0	1963-66
Battle Creek near Moran (d)	08086235	108	1967-68
Battle Creek near Eolian (e)	08086240	137	1963-66
Pecan Creek at FM 1853 near Eolian (e)	08086250	6.95	1963-66
Pecan Creek near Eolian (d)	08086260	26.40	1967-75
Big Sandy Creek near Breckenridge (e)	08086300	288	1962-75
Hubbard Creek near Breckenridge (d)	08086500	1,089	1955-86
Clear Fork Brazos River near Crystal Falls (e)	08087000	5,658	1916-20, 1928-51
Clear Fork Brazos River near Eliasville (d)	08087300	5,697	1916-20, 1924-25, 1928-51, 1962-82
Salt Creek at Olney (d)	08088100	11.80	1958-77
Salt Creek near Newcastle (d)	08088200	120	1958-60
Briar Creek near Graham (d)	08088300	24.20	1958-89
Brazos River at Farm Road 1287 near Graham (e)	08088420	13,432	1970-77
Big Cedar Creek near Ivan (d)	08088450	97	1965-89
Brazos River at Morris Sheppard Dam near Graford (d)	08088600	14,030	1990-94
Elm Creek Tributary near Graford (e)	08089100	1.10	1965-74
Lake Palo Pinto near Santo (e)	08090300	461	1964-82
Palo Pinto Creek near Santo (d)	08090500	573	1925, 1951-76
Cidwell Branch near Granbury (e)	08090850	3.37	1966-73
Morris Branch near Bluff Dale (e)	08091200	0.06	1965-73
Panther Branch near Tolar (e)	08091700	7.82	1966-74
Lake Pat Cleburne near Cleburne (d)	08091900	100	1965-85
Nolan River at Blum (d)	08092000*	282.0	1924-87
Brazos River near Whitney (d)	08093000	17,648	1939-74
Bond Branch near Hillsboro (e)	08093200	0.36	1965-74
Hackberry Creek at Hillsboro (d)	08093250	57.9	1980-92
Hackberry Creek below Hillsboro (e)	08093260	86.8	1980-92
Aquilla Creek above Aquilla (d)	08093360*	255.0	1980-92
Cobb Creek near Abbott (d)	08093400	12.40	1967-79
Aquilla Creek at RR bridge near Aquilla (e)	08093530	345	1976-85

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Aquilla Creek at Farm Road 2114 near Aquilla (e)	08093540	351	1976-85
Aquilla Creek at Farm Road and 1858 near Ross (e)	08093560	392	1976-85
Aquilla Creek at Farm Road 933 near Ross (e)	08093580	397	1976-85
North Bosque River at Stephenville (d)	08093700	95.90	1958-79
Green Creek SWS #1 near Dublin (d)	08094000	4.19	1955-77
Green Creek near Alexander (d)	08094500	45.40	1958-73
South Bosque River near McGregor (e)	08095220	15.9	1967-73
Willow Branch at McGregor (e)	08095250	2.52	1966-73
Middle Bosque River near McGregor (d)	08095300*	182.0	1959-86
Hog Creek near Crawford (d)	08095400*	78.0	1959-86
South Bosque River near Speegleville (d)	08095500	386	1924-30
Bosque River near Waco (d)	08095600	1,656	1960-82
Box Branch at Robinson (e)	08096550	0.34	1965-73
Cow Bayou SWS No. 4 (inflow) near Bruceville (e)	08096800	5.04	1958-75
Cow Bayou at Mooreville (d)	08097000	83.50	1958-75
Brazos River near Marlin (d)	08097500	30,211	1939-51
Deer Creek at Chilton (d)	08098000	84.50	1934-36
Little Pond Creek at Burlington (d)	08098300	23	1963-82
Leon Reservoir near Ranger (e)	08099000	259	1955-82
Leon River near De Leon (d)	08099100*	479.0	1960-87
Sabana River near De Leon (d)	08099300*	264.0	1960-87
Sabana River Tributary near De Leon (e)	08099350	0.48	1966-74
Leon River near Hasse (d)	08099500	1,261	1939-91
Eidson Creek near Hamilton (e)	08100100	2.91	1965-73
Bermuda Branch near Gatesville (e)	08100400	0.50	1966-73
Hoffman Branch near Hamilton (e)	08100800	5.56	1966-74
Cowhouse Creek near Killeen (d)	08101500	667	1925, 1939-42
Nolan Creek at Belton (d)	08102600	112	1974-82
School Branch near Lampasas (e)	08102900	0.90	1966-73
Fleece Branch near Lampasas (e)	08103450	1.08	1965-74
Lampasas River at Youngsport (d)	08104000	1,240	1924-80
Lampasas River near Belton (d)	08104100*	1,321	1963-89
Salado Creek above Salado (e)	08104290*	134	1985-88
Salado Creek below Salado Springs (d)	08104310*	136	1985-87
N. Fork San Gabriel River upstream from State Highway 418 at Georgetown (e)	08104795*	271	1985-88
North Fork San Gabriel River at Georgetown (d)	08104800	268	1964-68
South Fork San Gabriel River near Bertram (e)	08104850	8.9	1967-74
San Gabriel River at Georgetown (d)	08105000*	405	1924-25, 1934-73, 1984-87
Berry Creek at State Hwy. 971 near Georgetown (d)	08105200*	117	1985-87
San Gabriel River near Weir (d)	08105300*	563	1977-90
San Gabriel River near Circleville (d)	08105400	599	1924-34, 1967-77
Avery Branch near Taylor (e)	08105900	3.52	1966-73
Brushy Creek at Coupland (d)	08106000	205.0	1924-26
Brushy Creek near Rockdale (d)	08106300	505	1967-80
San Gabriel River near Rockdale (d)	08106310	1,359	1975-92
Big Elm Creek near Temple (d)	08107000	74.70	1934-36
Big Elm Creek near Buckholts (d)	08107500	171	1934-36
North Elm Creek near Ben Arnold	08108000	32.20	1935-36
North Elm Creek near Cameron (d)	08108200	44.80	1963-73
Little Branch near Bryan (e)	08108800	0.14	1966-73
Brazos River near Bryan (d)	08109000	39,515	1899-1903, 1918-92
Brazos River near College Station (d)	08109500	30,033	1899-1902, 1918-25
Yegua Creek near Somerville (d)	08110000	1,009	1924-92
Brazos River at Washington (e)	08110200	41,192	1966-96

Station name	Station number	Drainage area (mi ²)	Period of record (water years)
Lake Mexia near Mexia (e)	08110300	196	1961-86
Plummers Creek at Mexia (e)	08110350	4.42	1965-73
Navasota River near Groesbeck (d)	08110400	311	1965-79
Navasota River near Bryan (d)	08111000	1,454	1951-94, 1994-97
Navasota River near College Station (d)	08111010	1,809	1977-85
Burton Creek at Villa Maria Road, Bryan (d)	08111025	1.33	1968-70
Hudson Creek near Bryan (d)	08111050	1.94	1968-70
Winkleman Creek near Brenham (e)	08111100	0.75	1965-73
Piney Creek near Bellville (e)	08111600	30.7	1948, 1955, 1958, 1964-89
West Fork Mill Creek near Industry (e)	08111650	15.3	1964-89
Mill Creek near Bellville (d)	08111700	376	1963-93
Brazos River near San Felipe (d)	08112000	35,100	1939-57
Brazos River near Wallis (e)	08112200	44,700	1974-75
Brazos River Authority Canal A near Fulshear (d)	08112500	N/A	1932-54, 1958-73
Richmond Irrigation Co. Canal near Richmond (d)	08113500	N/A	1932-54, 1956-78
Brazos River near Juliff (d)	08114500	45,084	1949-69
Seabourne Creek near Rosenberg (e)	08114900	5.78	1968-74
Fairchild Creek near Needville (d)	08115500	26.20	1947-55
Big Creek near Guy (d)	08116000	116	1947-50
Dry Creek near Rosenberg	08116400	8.65	1959-79
Dry Creek near Richmond (d)	08116500	12.20	1947-50, 1957-58

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations prior to the 1997 water year. Daily records of specific conductance, temperature, sediment, color, pH, dissolved oxygen, or chloride were collected and published for the record shown for each station.

[SC, specific conductance; T, temperature; S, sediment; C, color; pH, pH; DO, dissolved oxygen; Cl, chloride.]

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
West Fork San Jacinto River near Conroe	08068000	828	SC, T	1962-90,
			DO	1979-81
Panther Branch near Spring	08068450	34.50	S	1975-76
West Fork San Jacinto River near Humble	08069500	1,741	SC, Cl	1945-46
San Jacinto River near Huffman	08071500	2,800	SC	1945-54,
			T	1949-54
Buffalo Bayou at West Belt Drive at Houston	08073600	307	SC, T	1979-81
Buffalo Bayou at Main Street, Houston	08074600	469	SC, T, DO	1986-92
Chocolate Bayou near Alvin	08078000	87.70	SC, T	1978-81
North Fork Double Mountain Fork Brazos River near Post	08079575	438	SC, T	1984-93
Double Mountain Fork Brazos River near Rotan	08080000	8,536	SC, T	1950-51
Double Mountain Fork Brazos River near Aspermont	08080500	8,796	SC, T, S	1949-51
			SC, T	1957-95
McDonald Creek near Post	08080540	103	SC, T	1964-78
Salt Fork Brazos River near Peacock	08081000	4,619	SC, T	1950-51,
				1965-86
Croton Creek near Jayton	08081200	290	SC, T	1961-80
Salt Croton Creek near Aspermont	08081500	64.30	SC	1969-77,
			T	1972-73
Salt Fork Brazos River near Aspermont	08082000	5,130	SC, T, pH, Cl	1949-51,
			SC, T	1957-82
Stinking Creek near Aspermont	08082100	88.80	T	1950,
			SC, T	1966-69
North Croton Creek near Knox City	08082180	251	SC, T	1966-86
Brazos River at Seymour	08082500	15,538	SC, T	1960-95
Clear Fork Brazos River at Hawley	08083240	1,416	SC, T	1968-79,
				1982-84
Clear Fork Brazos River at Nugent	08084000	2,199	SC, T, pH, Cl	1948-53
California Creek near Stamford	08084800	478	SC, T	1963-79
Paint Creek near Haskell	08085000	914	SC, T	1950-5
Clear Fork Brazos River at Fort Griffin	08085500	3,988	SC, T, S	1950-51,
			SC, T	1968-79,
				1982-84
Hubbard Creek near Sedwick	08086015	128	SC, T	1964-66
Deep Creek at Moran	08086050	228	SC, T	1963-75
Hubbard Creek near Albany	08086100	454	SC, T	1962-75
Salt Prong Hubbard Creek at U.S. Highway 380 near Albany	08086120	61	SC, T	1964-68
North Fork Hubbard Creek near Albany	08086150	39.30	SC, T	1964-90
Salt Prong Hubbard Creek near Albany	08086200	115	SC, T	1962-63
Snailum Creek near Albany	08086210	22.90	SC, T	1964-66
Battle Creek near Moran	08086235	108	SC, T	1967-68
Pecan Creek near Eolian	08086260	26.40	SC, T	1967-75
Big Sandy Creek near Breckenridge	08086300	288	SC, T	1962-77
Hubbard Creek near Breckenridge	08086500	1,089	SC, T	1955-75
Clear Fork Brazos River at Eliasville	08087300	5,697	SC, T	1962-82
Brazos River near South Bend	08088000	22,673	SC, Cl	1942-48,
			SC, T	1978-81
Salt Creek at Olney	08088100	11.80	SC, T	1958-60
Salt Creek near Newcastle	08088200	120	SC, T	1958-60
Brazos River at Morris Sheppard Dam near Graford	08088600	23,596	SC	1942-91,
			T	1950-55,
				1966-91

DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

xv

Station name	Station number	Drainage area (mi ²)	Type of record	Period of record (water years)
Brazos River near Dennis	08090800	25,237	SC, T	1971-95
Brazos River at Whitney Dam near Whitney	08092600	27,189	SC, T	1947-97
Aquilla Creek above Aquilla	08093360	255	SC, T	1980-83
Aquilla Creek near Aquilla	08093500	308	SC, T	1966, 1968-82
Brazos River near Highbank	08098290	30,436	T	1968-84
Leon River near Eastland	08098500	235	SC, T	1950-53
Leon River near Hasse	08099500	1,261	SC, T	1980-82, 1990-97
Leon River near Belton	08102500	3,542	T	1957-72
South Fork Rocky Creek near Briggs	08103900	33.30	S	1963-65
Lampasas River at Youngsfort	08104000	1,240	SC, T	1961-64
Little River near Little River	08104500	5,228	SC, T	1965-73, 1980-82
San Gabriel River near Weir	08105300	563	T	1977-82
San Gabriel River at Laneport	08105700	738	T	1977-82
Brazos River at State Highway 21 near Bryan	08108700	39,049	SC, T	1961-65
Brazos River near Bryan	08109000	39,515	SC, T	1966
Brazos River near College Station	08109500	39,599	SC, T	1961-84
Yegua Creek near Somerville	08110000	1,009	SC, T	1961-67
Navasota River above Groesbeck	08110325	239	SC, T	1968-89
Navasota River near Groesbeck	08110400	311	SC, T	1968-78
Navasota River near Easterly	08110500	968	SC	1942-43, 1947
Navasota River near Bryan	08111000	1,454	SC, T	1959-81, 1976-81
Brazos River near Richmond	08114000	45,007	S	1966-86, 1942-95, 1951-95
Brazos River near Rosharon	08116650	45,399	SC, T	1969-80
Brazos River at Harris Reservoir near Angleton	08116700	44,000	SC	1962-77, 1967-77
Brazos River at Brazoria Reservoir near Brazoria	08117200	44,000	SC	1962-77, 1967-77
San Bernard River near Boling	08117500	727	SC, T	1978-81

WATER RESOURCES DATA—TEXAS, 1998

VOLUME 2

SAN JACINTO RIVER BASIN, BRAZOS RIVER BASIN, SAN BERNARD RIVER BASIN, AND INTERVENING COASTAL BASINS

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with Federal, State, and City agencies, obtains a large amount of data pertaining to the water resources of Texas each water year. Such data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in four volumes of this report series entitled "Water Resources Data - Texas."

This report series includes records of stage, discharge, and water quality of streams and canals; stage, contents, and water quality of lakes and reservoirs and water levels and water quality of ground-water wells. Volume 2 contains records for water discharge at 74 gaging stations; stage only at 9 gaging stations; stage and contents at 21 lakes and reservoirs; and water quality at 32 gaging stations. Also included are data for 73 partial-record stations comprised of 43 flood-hydrograph, 9 low-flow, and 16 crest stage, and 5 miscellaneous stations. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating Federal, State, and City agencies in Texas.

This series of annual reports for Texas began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report was changed to its present format, with data on quantities and quality of surface water contained in each of three volumes. Ground-water levels and water quality have been published in a separate volume beginning with the 1991 water year.

Prior to introduction of this series and for several water years concurrent with it, water resources data for Texas were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 7 and 8." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Bldg. 41, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official U.S. Geological Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water Data Report TX-98-2." For archiving and general distribution, the reports for the 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or may be purchased on microfiche from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161 (703) 605-6000.

Additional information, including the current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (512) 927-3500.

COOPERATION

Federal agencies that assisted the U.S. Geological Survey in the collection of data in this report in the form of funds or services in water year 1998 are:

- Corps of Engineers, U.S. Army.
- International Boundary and Water Commission, United States and Mexico, U.S. Section.
- U.S. Bureau of Reclamation.

Organizations that assisted in the collection of data in this report through joint funding agreements through the Texas Water Development Board or through direct joint funding agreements with the U.S. Geological Survey are:

Texas Water Development Board, G.E. Kretzschmar, Executive Administrator; the cities of Abilene, Arlington, Austin, Corpus Christi, Fort Worth, Gainesville, Garland, Georgetown, Graham, Houston, Lubbock, Nacogdoches, San Angelo, and Wichita Falls; Bexar, Medina, and Atascosa Counties Water Improvement District No. 1; Barton Springs/Edwards Aquifer Authority; Brazos River Authority; Canadian Municipal Water Authority; Coastal Water Authority; Colorado River Municipal Water District; Dallas Public Works Department; Dallas Water Utilities; Edwards Underground Water District; Fort Bend Subsidence District; Franklin County Water District; Galveston County; Greenbelt Municipal and Industrial Water Authority; Guadalupe-Blanco River Authority; Harris-Galveston Coastal Subsidence District; Harris County Office of Emergency Management; Harris County Flood Control District; Houston-Galveston Area Council; Lavaca-Navidad River Authority; Lower Colorado River Authority; Lower Neches Valley Authority; North Central Texas Council of Governments; North Central Texas Municipal Water Authority; Northeast Texas Municipal Water District; North Texas Municipal Water District; Pecos River Commission; Red Bluff Water Power Control District; Red River Authority; Sabine River Authority of Texas; Sabine River Compact Administration; San Antonio City Public Service Board; San Antonio River Authority; San Antonio Water System; San Jacinto River Authority; Somervell County Water District; Tarrant Regional Water District; Texas Soil & Water Conservation Board; Texas State Department of Highways & Public Transportations; Texas Natural Resources Conservation Commission; Texas Water Development Board; Titus County Fresh Water Supply District No. 1; Trinity River Authority; Upper Guadalupe River Authority; Upper Neches River Municipal Water Authority; West Central Texas Municipal Water District; and Wichita County Water Improvement District No. 2.

HYDROLOGIC CONDITIONS

Large variations in precipitation, runoff, and streamflow characterize the usual hydrologic conditions in Texas. In the eastern part of the State, streams typically are deep with wide alluvial flood plains, and streamflow is perennial. In the western part of the State, most streams flow through arroyos, and streamflow usually is ephemeral.

Streamflow across the State during water year 1998 generally was normal.

Conservation storage in 77 selected reservoirs throughout the State, with a combined conservation capacity of 34,558,000 acre-feet, decreased from 82 percent at the end of September 1997 to 75 percent at the end of September 1998. Records from these reservoirs indicate that storage decreased in 63, decreased in 10, and remained the same in 4.

The area for which water resources data are presented in volume 2 extends from the New Mexico border in northwestern Texas, southeastward across the central part of the State, to the upper middle Texas Gulf Coast. Normal annual precipitation ranges from less than 17 inches in the westernmost part of the area to nearly 50 inches along the Texas Gulf Coast. Average annual runoff ranges from less than 1 inch in the west to more than 15 inches in places along the Texas Gulf Coast. The area described in volume 2 and the location of selected streamflow-gaging stations in the area are shown in figure 1.

Streamflow

In the area covered in volume 2, streamflow was generally normal during water year 1998 in the Brazos River Basin and above normal in the San Jacinto River Basin. Streamflow for water year 1998 and for the period of record at six selected stations (fig. 1) for which data are included in volume 2 is presented in table 1.

At the four long-term hydrologic index stations in the State, monthly mean streamflow during water year 1998 ranged from normal to above normal. Monthly mean discharges for water year 1998 and the median of the long-term monthly means for water years 1961–90 for the four long-term hydrologic index stations in the State are shown in figure 2. Streamflow at the hydrologic index station North Bosque River near Clifton had above normal streamflow during December through March and normal streamflow for the remaining 8 months of water year 1998. Streamflow at the station Neches River near Rockland was normal during October through December, April, and August, above normal January through March and September, and below normal for the remaining 3. The station North Concho River near Carlsbad had above normal streamflow during August and normal streamflow for the remaining 11 months. Streamflow for the station Guadalupe

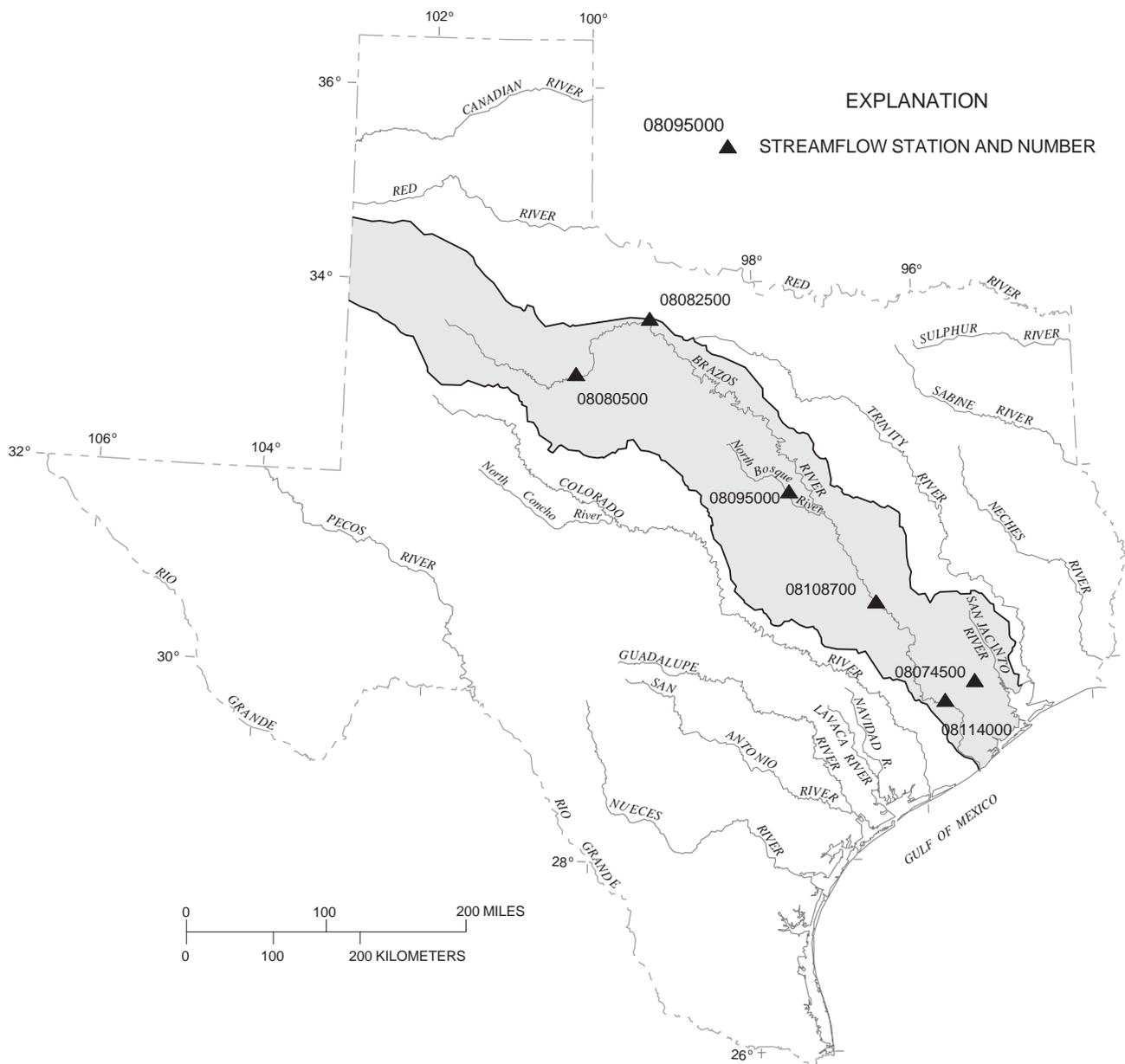
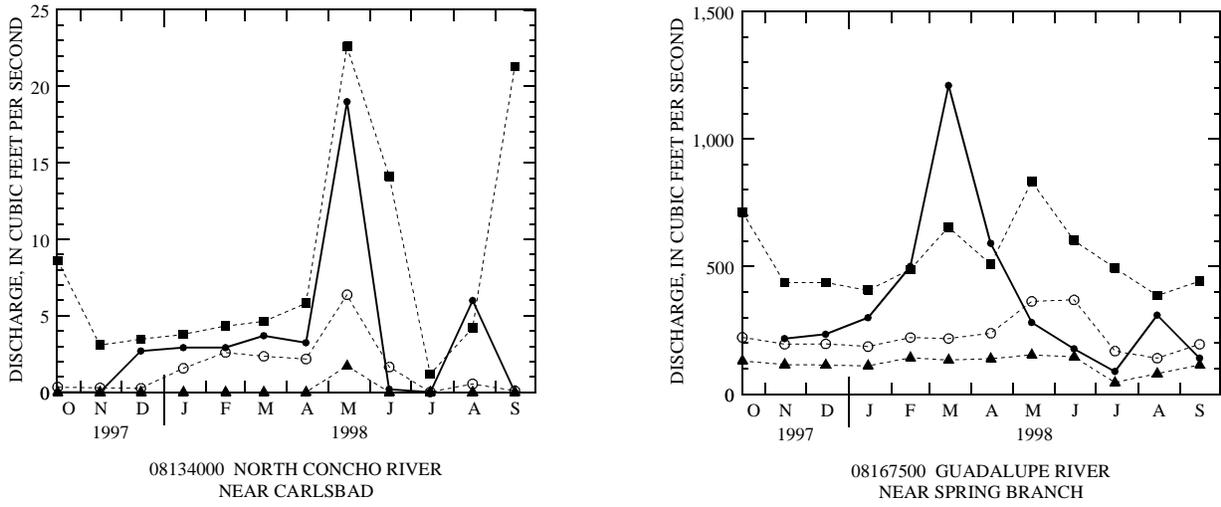
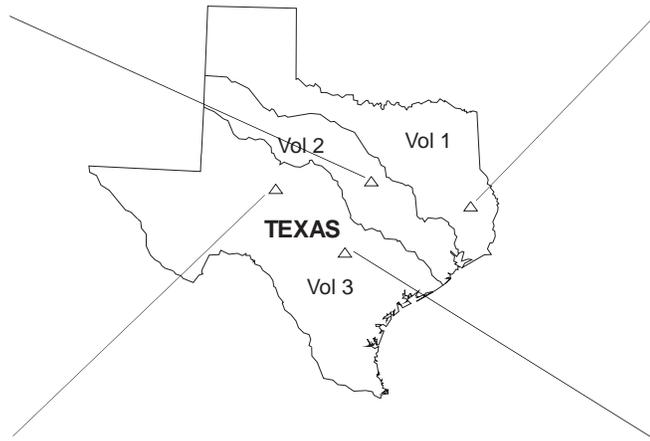
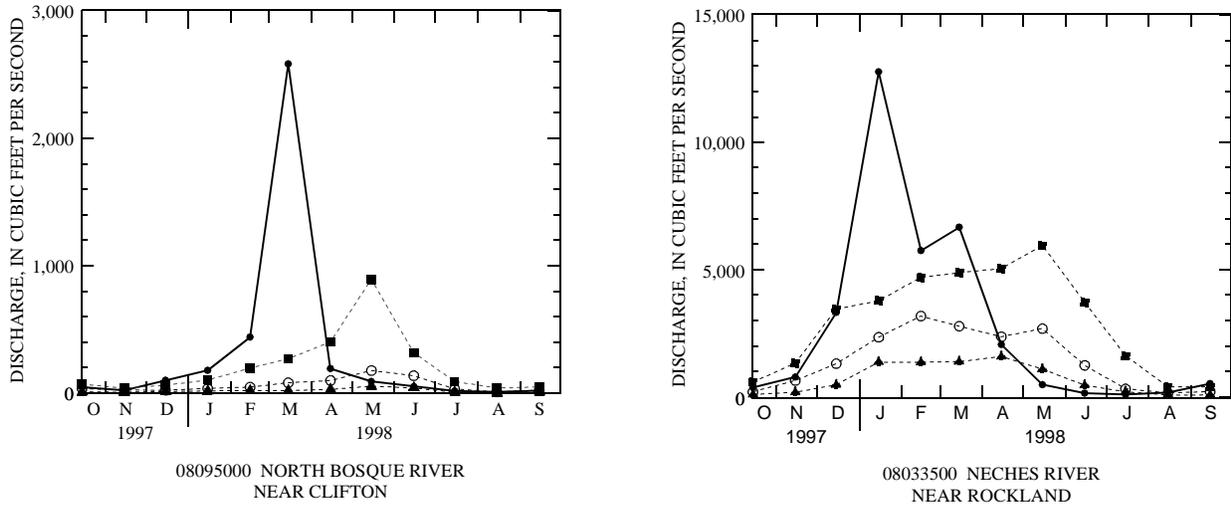


Figure 1. Area of Texas covered by volume 2 (shaded) and location of selected streamflow stations in volume 2.

WATER RESOURCES DATA—TEXAS, 1998



EXPLANATION

- MONTHLY MEAN DISCHARGE FOR 1998 WATER YEAR
- MEDIAN OF MONTHLY MEAN DISCHARGE FOR 1961-90 WATER YEARS
- ▲--- 25 PERCENT QUANTILE
- 75 PERCENT QUANTILE

Figure 2. Monthly mean discharges at four long-term hydrologic index stations during 1998 water year and median of the monthly mean discharges for 1961-90 water years.

River near Spring Branch was above normal February through April, and normal November through January and May through September (no data available for October).

Conservation storage in 21 selected reservoirs in this area of the State, with a total combined conservation capacity of 3,805,000 acre-feet, decreased from 92 percent of capacity at the end of September 1997 to 79 percent at the end of September 1998. Records from these reservoirs indicate that storage decreased in 16, increased in 3, and remained the same in 2 during the water year.

Water Quality

Dissolved-solids concentrations in most streams in the State are inversely related to streamflow discharges. During years when precipitation and runoff are less than normal, streamflow commonly is more mineralized than during years when precipitation and runoff are normal or greater than normal. However, for streams in which discharge is controlled by reservoirs, the dissolved-solids concentrations may remain relatively constant despite substantial fluctuations in precipitation and runoff.

Table 1. Streamflow at six selected stations

Station no. and name	Discharge during 1998 water year (cubic feet per second)			Discharge during period of record (cubic feet per second)		
	Maximum instantaneous	Minimum daily mean	Mean	Maximum instantaneous	Minimum daily mean	Mean
<u>San Jacinto River Basin</u>						
08074500	Whiteoak Bayou at Houston, Tex.	21,200	24	184	25,100	0.20 102 (1936-98)
<u>Brazos River Basin</u>						
08080500	Double Mountain Fork Brazos River nr Aspermont, Tex.	1,350	0	7.6	5,160	0 40.6 (1994-98)
08082500	Brazos River at Seymour, Tex.	1,560	0	61.1	95,400	0 284 (1964-98)
08095000	North Bosque River near Clifton, Tex. ^{1/}	137,000	.81	328	200,000	.01 250 (1968-98)
08108700	Brazos River at State Hwy. 21 near Bryan, Tex.	59,700	299	5,657	68,500	169 5,583 (1993-98)
08114000	Brazos River at Richmond, Tex.	53,000	631	7,735	119,000	55 7,610 (1941-98)
^{1/} Hydrologic index station.						

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

National Stream Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of the constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and remobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

Additional information about the NASQAN program is available through the world wide web at:

<http://water.usgs.gov/public/nasqan/>

The National Atmospheric Deposition Program/National Trends Network (NAPD/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites. (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO₂ emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred. (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO₂ and NO_x scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

<http://nadp.nrel.colostate.edu/NAPD>

National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. There are currently two NAWQA Programs operating in Texas; the Trinity NAWQA and the South Central Texas NAWQA.

Additional information about the NAWQA Program is available through the world wide web at:

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

<http://txwww.cr.usgs.gov/trin/index.html>

<http://txwww.cr.usgs.gov/sctx/index.html>

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1996 water year that began October 1, 1995, and ended September 30, 1996. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The “downstream order” system is used for regular surface-water stations and the “latitude-longitude” system is used for wells and, in Texas, for surface-water stations where only miscellaneous measurements are made.

Downstream Order Numbering

Since October 1, 1950, the order of listing hydrologic-station records in U.S. Geological Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the “List of Stations” in the front of this report. Each indentation represents one rank. This downstream order and system of indentation shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 08057000, which appears just to the left

of the station name, includes the 2-digit Part number “08” plus the 6-digit downstream-order number “057000.” The Part number designates the major river basin; for example, Part “08” is the Western Gulf of Mexico basin.

Records of Stage and Water Discharge

Records of stage and streamflow may be complete or partial. Complete records of discharge are those obtained using a stage-recording device through which either instantaneous or daily mean discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated for any time, or period of time. They may be obtained using a stage-recording device, but need not be. Because daily mean discharges and reservoir contents commonly are published for such stations, they are referred to as “daily stations.”

By contrast, partial records are obtained through discrete measurements and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as “Flood-hydrograph partial records,” “Crest-stage partial records,” or “Low-flow partial records.” Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow channel gain and loss studies, may be considered as partial records, but they are presented separately in this report. Instantaneous peak discharges are presented for all but the low-flow partial-record stations.

Data Collection and Computation

The data obtained at a complete record gaging station on a stream or canal consist of records of stage (that is every 15, 30, or 60 minutes), measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information such as weather records, are used to compute daily mean discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute lake storage.

Records of stage are obtained with recorders at selected time intervals. Measurements of discharge are made with current meters and indirect procedures using methods adopted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, TWRI, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves then are constructed. From these curves, rating tables indicating the discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves can be extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques. Stage-discharge ratings at gaging stations are described in TWRI, Book 3, Chapter A10.

Instantaneous discharges are computed by applying each individual recorded stage (gage height) to the stage-discharge table. The daily mean discharge is computed as the mean of the instantaneous discharges. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations, that the daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, bays, or other sources. This necessitates the use of the slope method in which the slope (fall) in a reach of the stream is a factor in computing discharge. The slope is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relation of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes are determined. If the stage-content relation changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relation. Even when this is done, the contents computed may increase in error as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relations much as other stream discharges are computed.

For some streamflow gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the stage sensor or recorder fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily mean discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consists of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly-mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7- day low-flow minimums, and flow duration.

Station Manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station

name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years which the revisions apply to. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.-- Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error. Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscripts published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check, because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary

below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the daily mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period, expressed as "FOR WATER YEARS ____ - ____, BY WATER YEAR (WY)," will list the first and last water years of the range selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____ - ____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. However, data for partial water years, if any, will only be used in the statistical calculations, if appropriate. For example, all of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript,

occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the column heading. When this occurs, it should be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data is omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period.

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent.

Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables, is on file in the Texas District. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications.

A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin. A careful distinction needs to be made between “continuing records”, as used in this report, and “continuous recordings,” which refers to a continuous graph or a series of discrete values obtained by data logger. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measure-

ments made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Records of surface-water quality at some National Stream Quality Accounting (NAWQA) Sites include data collected by different government agencies as identified in the water-quality data tables under AGENCY COLLECTING SAMPLE (CODE NUMBER). Values for this code are given below:

- 1028 - U.S. Geological Survey
- 84823 - International Boundary & Water Commission

Procedures for on site measurements and for collecting, treating, and shipping samples are given in publications on “Techniques of Water-Resources Investigations,” Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under “PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS” which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Texas Office of the Central Region Office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector. Information on the method used to collect the sample at National Stream Quality Accounting Network (NASQAN) sites is given in the water-quality data tables under SAMPLING METHOD. Values for this code are given below:

- 10 - Equal Width Increment (EWI)
- 20 - Equal Discharge Increment (EDI)
- 25 - Timed Sampling Interval
- 30 - Single Vertical
- 40 - Multiple Verticals
- 50 - Point Sample
- 60 - Weighted Bottle
- 70 - Grab Sample (DIP)
- 90 - Discharge Integrated, Centroid
- 120 - Velocity Integrated
- 8010 - Other

Detailed information on sampling methods may be found in the following publications: OFR-90-127 "Guidelines for Collection and Analysis of Water-Quality Samples from Streams in Texas", OFR-94-455 "Field Guide for Collecting and Processing Stream-Water Samples for the National Water-Quality Assessment Program", and OFR-94-539 "U.S. Geological Survey protocol for the collection and processing of surface-water samples for the subsequent determination of inorganic constituents in filtered water". Specific questions pertaining to water-quality sample collection may be directed to the District Water-Quality Specialist in Austin, Texas, or the Regional Water-Quality Specialist in Denver, Colorado.

Additional information about the NASQAN program is available through the world wide web at:

<http://water.usgs.gov/public/nasqan/>

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (alkalinity), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of alkalinity in the laboratory.

For chemical-quality stations equipped with water-quality monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the Texas District Office. The address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the Texas District Office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge-weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S. Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the U.S. Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Historical and current (1996) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then

those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radio-chemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. These periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remarks Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
e or E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (Organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blanks.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (mg/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concen-

trations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the mg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

NOTE: Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (303-491-5643).

WATER QUALITY-CONTROL DATA

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample, and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sample preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Sequential sample - a type of replicate sample in which the samples collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

<http://txwww.water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at +35 °C ± -1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at +44.5 °C ± -0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at +35 °C ± -1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic invertebrates are invertebrate animals inhabiting the bottoms of lakes, streams, and other water bodies. They are useful as indicators of water quality.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500

°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color Unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second per day [$(\text{ft}^3/\text{s})/\text{d}$] is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

Cubic feet per second per square mile [$(\text{ft}^3/\text{s})/\text{mi}^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 μm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$d = - \sum_{i=1}^n \frac{s_i}{n} \log_2 \frac{s_i}{n}$$

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Extractable organic halides (EOX) are organic compounds which contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream bottom sediments. The ethyl acetate

extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the stream bottom sediments.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Supplementary gage is a gage used to obtain additional data. A supplementary gage may be used in place of the principal gage if the latter is isolated or cut off from the channel, or registers only above (or below) a certain gage height. One or more supplementary gages may be used on bypass channels or overflow channels, or on streams that flow in several channels, each of which is rated independently.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

High tide is the maximum height reached by each rising tide.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Low tide is the minimum height reached by each falling tide.

Mean high tide is the average of all high tides over a specified period.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Microsiemens per centimeter ($\mu\text{S/cm}$, US/CM) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L , mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. It is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic-invertebrate samples. They consist of a series of spaced, hardboard plates on an eye-bolt.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited stream-flow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	0.004 - 0.062	Sedimentation
Sand	0.062 - 2.0	Sedimentation/sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes and [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes and [$\text{mg O}/(\text{m}^3/\text{time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of

bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sea level was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports and refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed-load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The entire sample is used for the analysis.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by

dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Suspended total residue at 105 °C concentration is the concentration of suspended sediment in the sampled zone expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). A small aliquot of the sample is used for the analysis.

Total-sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely

placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hard-board) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest USGS topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total-recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Synoptic Studies Short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled,

they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom Animal
 Phylum Arthropoda
 Class Insecta
 Order Ephemeroptera
 Family Ephemeridae
 Genus *Hexagenia*
 Species *Hexagenia limbata*

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total recoverable is the amount of a given constituent that is in solution after a representative water- suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation’s surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Volatile Organic Compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are man-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1990, is called the “1990 water year.”

WDR is used as an abbreviation for “Water-Data Report” in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for “Water-Resources Data” in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for “Water-Supply Paper” in reference to previously published reports.

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and “U.S. Geological Survey Techniques of Water-Resources Investigations.”

- 1-D1. *Water temperature-influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 p.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 p.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 p.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 p.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 p.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. Scott Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 p.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 p.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 p.

- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 p.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 p.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 p.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 p.
- 3-A7. *Stage measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 p.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 p.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick, and J.F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 p.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 p.
- 3-A11. *Measurement of discharge by moving-boat method*, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12, 1986. 41 p.
- 3-A13. *Computations of continuous records of streamflow*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13, 1983. 53 p.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 p.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 p.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, N. Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 p.
- 3-A19. *Levels of streamflow gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 p.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 p.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 p.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self instruction*, by G.D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 p.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow-Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley. USGS--TWRI Book 3, Chapter B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 p.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 p.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 p.
- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 p.
- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 p.
- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 p.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 p.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 p.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 p.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 p.

- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 p.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 p.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 p.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 p.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 p.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 p.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 p.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 p.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 p.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 p.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak. USGS--TWRI Book 6, Chapter A5. 1993. 243 p.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 p.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 p.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 p.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1983. 110 p.
- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 p.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 p.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS--TWRI Book 9, Chapter A7. 1997. 49 p.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D.N. Myers and F.D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 p.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom Material Samples*, by D.B. Radtke: USGS--TWRI Book 9, Chapter A8. 1998. 48 p.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS--TWRI Book 9, Chapter A9. 1998. 60 p.

08067600 LAKE CONROE NEAR CONROE, TX

LOCATION.--Lat 30°21'30", long 95°33'39", Montgomery County, Hydrologic Unit 12040101, at service outlet tower at Conroe Dam on West Fork San Jacinto River, 140 ft upstream from centerline of dam, and 7.4 mi west of Conroe.

DRAINAGE AREA.--445 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Jan 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by an earthfill dam 11,300 ft long, including a controlled spillway. The dam was completed Sep 1, 1972, and deliberate impoundment began Jan 9, 1973. Water is used for municipal and industrial purposes in the Houston metropolitan area. A small diversion is also made for cooling purposes at the Gulf State Utilities generating plant on Lewis Creek Reservoir near Conroe. During the current year, 62,844 acre-ft were diverted to Lewis Creek Reservoir for that purpose. A spillway with five 40- x 30-foot tainter gates is located near the center of dam. Low-flow releases are made through a separate multi-gated inlet tower. The tower has three gated openings and one uncontrolled opening. It is connected to a stilling basin and a concrete weir by a 14-foot-diameter conduit through the dam. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	212.0
Design flood.....	205.5
Top of tainter gates.....	202.5
Top of conservation pool (uncontrolled tower outlet).....	201.0
Crest of spillway (sill of tainter gates).....	173.0
Lowest gated outlet (invert).....	144.5

COOPERATION.--The capacity table, furnished by the Texas Water Development Board dated Jul 19, 1996, is based on a survey of Apr 1996.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 534,900 acre-ft, Oct 17, 1994 (elevation, 205.61 ft); minimum since normal operating level was reached, 336,900 acre-ft, Jan 11, 1989 (elevation, 196.17 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 467,200 acre-ft, Jan 8 (elevation, 203.33 ft); minimum contents, 382,400 acre-ft, Aug 4 (elevation, 199.23 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	404300	410200	420100	413100	416200	431200	415800	413700	405900	397500	383900	387400
2	404300	410200	419100	413100	416200	426700	415800	413700	405500	396900	383300	387100
3	403800	410200	422100	413500	416200	421300	415600	413700	405300	396700	383200	386700
4	403800	410000	422300	414000	416200	417600	415300	413300	405300	396400	385200	385900
5	403000	410200	422300	414700	416200	417600	414300	413300	407700	396200	384800	385800
6	403000	410200	422300	452000	416200	417800	414900	412900	405500	395800	384100	386300
7	402800	410200	422300	466900	416200	417200	414500	413300	405500	395100	387200	385900
8	403400	410000	421300	465800	416200	416400	414700	413100	405900	394900	386700	385600
9	404100	409800	421000	458500	416200	416000	414300	413500	405900	394300	386700	385200
10	404100	409800	420600	448000	420500	416000	413700	412300	404500	393900	386300	385000
11	404500	409800	418900	439000	420900	416000	413100	411600	404700	393200	385800	393200
12	405300	410600	418300	433000	422100	416000	412300	411600	404700	392500	385600	394900
13	410800	410800	417600	426300	421100	415800	412900	411200	403800	392800	385200	396400
14	411000	411400	416400	421100	418900	415800	412700	410600	403600	392300	386700	396900
15	411000	413100	416400	430500	416000	415500	412500	411000	403800	391900	386300	398100
16	410800	413100	414500	418500	416600	419700	414500	410800	403200	391300	386300	398900
17	410800	413100	415600	417500	418300	419900	413500	410600	402800	391200	387100	399300
18	410800	413100	415800	417500	420100	419300	414700	410400	402400	390600	387600	399300
19	410600	413100	414500	417500	419100	418300	414100	410000	401800	390200	387400	399100
20	410600	413100	417700	416200	418300	417200	413900	409600	401200	389700	386700	398700
21	410600	413100	416800	416200	418700	417000	414500	409000	400800	389100	387200	398500
22	410400	413100	418500	423100	424300	415800	414100	409000	400400	388600	387200	398500
23	409600	413100	423300	425500	426300	415800	413300	408200	400100	388400	387800	398100
24	409800	413100	425500	423600	424700	415600	413100	408400	399500	387800	387400	397900
25	411600	412900	425900	425800	421700	414700	412900	408000	399500	387100	387400	397500
26	410800	412900	423900	423600	434200	416200	412900	408200	398900	386900	387100	397300
27	410800	412900	424100	419800	436900	414700	416200	407800	398500	386300	386700	397500
28	410800	419300	421900	420500	435400	416200	414700	407700	398500	385800	386500	397100
29	410200	420900	419500	418900	---	416200	414300	407500	397900	385000	386900	396900
30	410200	420700	413500	417200	---	416200	413700	406900	397900	384600	388000	396700
31	410200	---	417600	416200	---	416500	---	406700	---	384300	388000	---
MAX	411600	420900	425900	466900	436900	431200	416200	413700	407700	397500	388000	399300
MIN	402800	409800	413500	413100	416000	414700	412300	406700	397900	384300	383200	385000
(+)	200.69	201.22	201.07	201.00	201.95	201.01	200.87	200.51	200.06	199.33	199.53	200.00
(@)	+5900	+10500	-3100	-1400	+19200	-18900	-2800	-7000	-8800	-13600	+3700	+8700

CAL YR 1997 MAX 433200 MIN 395400 (+) +600
WTR YR 1998 MAX 466900 MIN 383200 (+) -7600

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

SAN JACINTO RIVER BASIN

08067600 LAKE CONROE NEAR CONROE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Sep 1973 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

302127095335501 - LAKE CONROE SITE AC

DATE	TIME	RESER- VOIR STORAGE (AC-FT) (00054)	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (00078)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (M) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB											
24...	1045	425000	1.00	190	7.5	14.0	1.20	8.5	82	58	8
24...	1047	--	10.0	190	7.5	14.0	--	8.5	82	--	--
24...	1049	--	20.0	190	7.4	13.5	--	8.4	80	--	--
24...	1051	--	30.0	190	7.4	13.5	--	8.4	80	--	--
24...	1053	--	40.0	190	7.3	13.5	--	8.2	78	--	--
24...	1055	--	53.0	190	7.3	13.5	--	8.5	81	60	8
24...	1117	--	57.0	190	7.2	13.5	--	8.2	78	--	--
JUN											
25...	0920	399000	1.00	200	8.2	29.0	1.35	7.4	96	65	4
25...	0922	--	10.0	200	7.6	29.0	--	6.6	86	--	--
25...	0924	--	20.0	200	7.3	28.5	--	5.5	71	--	--
25...	0926	--	30.0	200	7.0	27.0	--	3.0	38	--	--
25...	0928	--	40.0	220	7.1	23.0	--	2.8	33	--	--
25...	0930	--	50.0	220	7.1	21.5	--	2.8	32	68	--
AUG											
26...	1045	387000	1.00	210	8.9	30.5	.80	7.9	106	68	7
26...	1047	--	5.00	215	7.9	29.0	--	5.7	74	--	--
26...	1049	--	10.0	215	7.5	29.0	--	4.8	63	--	--
26...	1051	--	20.0	215	7.4	29.0	--	4.0	52	--	--
26...	1053	--	25.0	215	7.4	29.0	--	4.0	52	--	--
26...	1055	--	30.0	215	7.3	28.5	--	3.9	50	--	--
26...	1057	--	40.0	240	7.0	25.0	--	2.4	29	--	--
26...	1059	--	50.0	265	6.9	23.0	--	2.4	28	76	--

302127095335501 - LAKE CONROE SITE AC

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB											
24...	21	1.7	11	.6	2.8	50	7.5	17	.11	9.3	100
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
24...	21	1.8	11	.6	2.8	52	7.5	18	<.10	9.4	104
24...	--	--	--	--	--	--	--	--	--	--	--
JUN											
25...	23	1.9	12	.6	3.0	61	7.6	17	<.10	6.2	107
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--
25...	24	2.0	11	.6	2.8	75	5.2	17	.10	12	124
AUG											
26...	24	1.9	12	.6	3.1	61	6.6	19	.12	8.5	111
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	27	2.2	11	.5	3.2	98	.61	17	<.10	16	147

08067600 LAKE CONROE NEAR CONROE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

302127095335501 - LAKE CONROE SITE AC

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB										
24...	<.010	.180	.038	.33	.37	<.010	<.010	--	<10	<4.0
24...	--	--	--	--	--	--	--	--	--	--
24...	<.010	.179	.045	.32	.36	<.010	<.010	--	<10	<4.0
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	<.010	.180	.047	.36	.40	<.010	<.010	--	<10	4.3
24...	--	--	--	--	--	--	--	--	--	--
JUN										
25...	<.010	<.050	<.020	--	.35	<.010	<.010	--	<10	63
25...	--	--	--	--	--	--	--	--	--	--
25...	<.010	<.050	.024	.31	.33	<.010	<.010	--	<10	210
25...	<.010	<.050	<.020	--	.37	<.010	.012	.04	120	872
25...	--	--	--	--	--	--	--	--	--	--
25...	<.010	<.050	.397	.39	.79	.143	.160	.49	1100	3110
AUG										
26...	<.010	<.050	.022	.35	.38	.016	.022	.07	<10	21
26...	--	--	--	--	--	--	--	--	--	--
26...	<.010	<.050	.083	.36	.45	.026	.016	.05	<10	125
26...	--	--	--	--	--	--	--	--	--	--
26...	<.010	<.050	.167	.35	.52	.023	.020	.06	94	500
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	<.010	<.050	2.59	.80	3.4	.595	.595	1.8	2300	4560

302132095333701 - LAKE CONROE SITE AL

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB							
24...	1105	1.00	190	7.4	14.0	1.00	8.4
24...	1107	10.0	190	7.4	13.5	--	8.4
24...	1109	20.0	190	7.4	13.5	--	8.4
24...	1111	30.0	190	7.4	13.5	--	8.4
24...	1113	40.0	190	7.4	13.5	--	8.4
24...	1115	50.0	190	7.3	13.5	--	8.1
JUN							
25...	0950	1.00	200	8.3	29.5	1.40	7.4
25...	0952	10.0	200	7.9	29.0	--	6.9
25...	0954	20.0	200	7.4	28.5	--	5.9
25...	0956	30.0	200	7.1	27.0	--	3.5
25...	0958	40.0	205	7.1	23.0	--	2.9
25...	1000	53.0	220	7.1	21.5	--	2.9
AUG							
26...	1118	1.00	215	7.6	29.0	.90	5.0
26...	1120	10.0	215	7.5	29.0	--	4.6
26...	1122	20.0	215	7.4	29.0	--	4.5
26...	1124	30.0	215	7.3	28.5	--	3.9
26...	1126	40.0	240	7.0	24.5	--	2.4
26...	1128	50.0	260	6.9	22.5	--	2.4
26...	1130	62.0	275	6.8	22.5	--	2.4

SAN JACINTO RIVER BASIN

08067600 LAKE CONROE NEAR CONROE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

302245095365301 - LAKE CONROE SITE BC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB								
24...	1020	1.00	190	7.4	14.5	.80	8.8	86
24...	1022	10.0	190	7.2	14.0	--	8.0	77
24...	1024	20.0	190	7.1	14.0	--	8.1	78
24...	1026	27.5	190	7.1	14.0	--	8.2	79
JUN								
25...	0900	1.00	200	8.4	30.0	.80	7.5	99
25...	0902	10.0	200	8.1	29.5	--	6.8	89
25...	0904	20.0	200	7.2	29.0	--	5.1	66
25...	0906	27.0	210	7.2	29.0	--	5.1	66
AUG								
26...	1025	1.00	210	9.1	31.5	.64	8.6	117
26...	1027	10.0	215	7.9	29.5	--	5.1	67
26...	1029	20.0	215	7.4	29.0	--	4.0	52
26...	1031	26.0	215	7.4	29.0	--	3.7	48

302323095341201 - LAKE CONROE SITE CC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB								
24...	1130	1.00	185	7.6	14.0	.90	8.8	85
24...	1132	10.0	185	7.5	14.0	--	8.7	84
24...	1134	20.0	185	7.4	13.5	--	8.3	79
24...	1136	30.0	185	7.3	13.5	--	8.3	79
24...	1138	40.0	185	7.3	13.5	--	8.3	79
24...	1140	50.0	185	7.3	13.5	--	8.2	78
24...	1142	57.0	185	7.3	13.5	--	8.3	79
JUN								
25...	1010	1.00	200	8.4	30.0	1.30	7.4	98
25...	1012	10.0	200	8.2	29.5	--	7.2	94
25...	1014	20.0	200	7.5	29.0	--	5.7	74
25...	1016	30.0	200	7.1	27.0	--	3.1	39
25...	1018	40.0	210	7.1	24.0	--	2.7	32
25...	1020	54.0	225	7.2	22.0	--	2.9	33
AUG								
26...	1142	1.00	210	8.9	31.0	.80	8.0	108
26...	1144	10.0	215	7.7	29.0	--	5.1	67
26...	1146	20.0	215	7.5	29.0	--	4.4	57
26...	1148	30.0	215	7.4	28.5	--	4.2	54
26...	1150	46.0	265	7.0	24.5	--	2.5	30

302320095334001 - LAKE CONROE SITE CL

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB								
24...	1145	1.00	185	7.6	14.5	1.00	8.7	85
24...	1147	10.0	185	7.5	14.0	--	8.6	83
24...	1149	20.0	185	7.5	14.0	--	8.6	83
24...	1151	30.0	185	7.4	13.5	--	8.3	79
24...	1153	40.0	185	7.3	13.5	--	8.0	76
24...	1155	48.0	185	7.3	13.5	--	8.1	77
JUN								
25...	1032	1.00	200	8.4	30.0	1.26	7.6	100
25...	1034	10.0	200	8.2	29.5	--	7.0	92
25...	1036	20.0	200	7.8	29.0	--	6.5	84
25...	1038	30.0	200	7.1	27.5	--	3.5	44
25...	1040	42.0	210	7.1	24.0	--	3.0	36
AUG								
26...	1200	1.00	210	9.0	30.0	.78	8.3	110
26...	1202	10.0	215	7.6	29.0	--	4.5	59
26...	1204	20.0	215	7.6	29.0	--	4.4	57
26...	1206	30.0	215	7.6	29.0	--	4.4	57
26...	1208	40.0	215	7.6	29.0	--	4.4	57

08067600 LAKE CONROE NEAR CONROE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

302448095374101 - LAKE CONROE SITE DC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (PER-CENT) (00301)
FEB								
24...	1205	1.00	185	7.5	15.0	.52	8.5	84
24...	1207	10.0	185	7.3	14.0	--	8.0	77
24...	1209	20.0	185	7.2	14.0	--	7.9	76
24...	1211	28.0	185	7.2	14.0	--	7.9	76
JUN								
25...	1100	1.00	200	8.6	30.5	1.00	7.5	100
25...	1102	10.0	200	8.0	30.0	--	6.2	82
25...	1104	26.0	205	7.2	29.5	--	3.6	47
AUG								
26...	1236	1.00	210	9.4	32.0	.60	9.1	125
26...	1238	10.0	220	7.5	29.5	--	3.2	42
26...	1240	20.0	220	7.5	29.5	--	3.1	41
26...	1242	24.5	220	7.5	29.5	--	3.1	41

302607095360901 - LAKE CONROE SITE EC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (PER-CENT) (00301)	HARD-NESS TOTAL (MG/L) AS CACO3 (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) AS CA (00904)	CALCIUM DIS-SOLVED (MG/L) AS CA (00915)
FEB											
24...	1240	1.00	180	7.5	15.0	.50	8.6	85	57	6	20
24...	1242	10.0	180	7.5	14.0	--	8.4	81	--	--	--
24...	1244	20.0	180	7.4	14.0	--	8.3	80	--	--	--
24...	1246	30.0	175	7.3	14.0	--	8.1	78	--	--	--
24...	1248	41.0	175	7.3	14.0	--	8.2	79	56	7	20
JUN											
25...	1130	1.00	200	8.4	30.5	.80	7.2	96	62	--	22
25...	1132	10.0	200	8.2	30.0	--	6.8	90	--	--	--
25...	1134	20.0	200	8.0	30.0	--	6.2	82	--	--	--
25...	1136	30.0	200	7.7	29.5	--	5.8	76	--	--	--
25...	1138	38.0	215	7.2	26.0	--	2.7	33	68	4	24
AUG											
26...	1250	1.00	210	9.1	31.5	.70	8.4	115	65	--	23
26...	1252	10.0	210	8.5	30.0	--	6.4	85	--	--	--
26...	1254	20.0	215	7.7	29.5	--	4.4	58	--	--	--
26...	1256	30.0	220	7.2	28.5	--	2.4	31	--	--	--
26...	1258	38.0	285	7.0	27.0	--	2.4	30	80	--	28

302607095360901 - LAKE CONROE SITE EC

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L) AS MG (00925)	SODIUM, DIS-SOLVED (MG/L) AS NA (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L) AS K (00935)	ALKA-LINITY WAT DIS FIX END CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L) AS SO4 (00945)	CHLO-RIDE, DIS-SOLVED (MG/L) AS CL (00940)	FLUO-RIDE, DIS-SOLVED (MG/L) AS F (00950)	SILICA, DIS-SOLVED (MG/L) AS SIO2 (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
FEB										
24...	1.7	11	.6	2.9	51	7.4	16	.10	9.3	100
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	1.7	11	.6	2.8	49	7.2	15	.12	9.0	97
JUN										
25...	1.8	12	.6	2.8	62	7.7	17	.13	6.4	106
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	2.0	11	.6	2.8	64	5.9	18	.10	9.0	114
AUG										
26...	1.9	12	.7	3.0	70	6.0	17	.12	8.7	114
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
26...	2.2	12	.6	3.5	110	.74	16	.11	14	155

SAN JACINTO RIVER BASIN

08067600 LAKE CONROE NEAR CONROE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

302607095360901 - LAKE CONROE SITE EC

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS P04) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB										
24...	<.010	.170	.036	.34	.37	<.010	<.010	--	21	<4.0
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	<.010	.172	.040	.32	.36	<.010	<.010	--	13	<4.0
JUN										
25...	<.010	<.050	.046	.30	.34	.010	<.010	--	<10	75
25...	--	--	--	--	--	--	--	--	--	--
25...	<.010	<.050	<.020	--	.35	<.010	<.010	--	14	413
25...	--	--	--	--	--	--	--	--	--	--
25...	<.010	<.050	.228	.36	.59	.026	.020	.06	160	1870
AUG										
26...	<.010	<.050	<.020	--	.38	.032	.034	.10	<10	60
26...	--	--	--	--	--	--	--	--	--	--
26...	<.010	<.050	.091	.35	.44	.043	.033	.10	38	531
26...	--	--	--	--	--	--	--	--	--	--
26...	<.010	<.050	3.20	.96	4.2	.502	.446	1.4	1400	5950

302714095372201 - LAKE CONROE SITE FC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- DUCT- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)
FEB								
24...	1305	1.00	170	7.4	15.0	.40	8.8	87
24...	1307	10.0	170	7.3	14.5	--	8.5	83
24...	1309	20.0	150	7.0	14.0	--	8.3	80
JUN								
25...	1155	1.00	200	8.7	31.5	.60	7.1	96
25...	1157	10.0	200	8.6	31.5	--	6.9	93
25...	1159	19.0	205	7.3	30.5	--	3.6	48
AUG								
26...	1315	1.00	205	9.4	32.0	.60	9.3	128
26...	1317	10.0	215	7.8	29.5	--	4.2	55
26...	1319	18.0	205	7.5	29.5	--	2.6	34
26...	1402	5.00	215	9.0	31.0	--	7.5	101
26...	1406	20.0	235	7.2	29.5	--	2.5	33

303129095360501 - LAKE CONROE SITE GC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- DUCT- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
FEB											
24...	1350	1.00	135	7.2	16.0	.20	8.4	85	36	2	12
24...	1352	10.0	115	6.9	13.5	--	8.3	79	--	--	--
24...	1354	20.0	115	7.0	13.0	--	8.0	76	--	--	--
24...	1356	26.0	115	7.0	13.0	.20	8.2	78	37	5	13
JUN											
25...	1235	1.00	220	9.0	32.0	.40	7.7	105	70	--	24
25...	1237	10.0	220	8.5	30.5	--	5.7	76	--	--	--
25...	1239	20.0	220	8.5	30.5	--	5.7	76	--	--	--
25...	1241	24.0	220	8.5	30.5	--	5.6	75	72	--	25
AUG											
26...	1400	1.00	215	9.4	33.5	.40	9.4	132	66	--	23
26...	1404	10.0	225	7.4	30.0	--	3.1	41	--	--	--
26...	1408	24.0	235	7.2	29.5	--	2.5	33	72	11	25

08067600 LAKE CONROE NEAR CONROE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

303129095360501 - LAKE CONROE SITE GC

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB										
24...	1.2	6.4	.5	2.3	34	5.2	11	<.10	8.7	68
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	1.2	5.9	.4	2.2	32	4.2	10	<.10	8.8	65
JUN										
25...	2.2	13	.7	3.2	72	7.9	21	.13	7.3	122
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	2.2	14	.7	3.2	74	7.3	20	.15	8.1	124
AUG										
26...	2.0	13	.7	3.3	66	5.5	19	.13	10	116
26...	--	--	--	--	--	--	--	--	--	--
26...	2.2	14	.7	3.5	61	5.4	25	.14	13	126

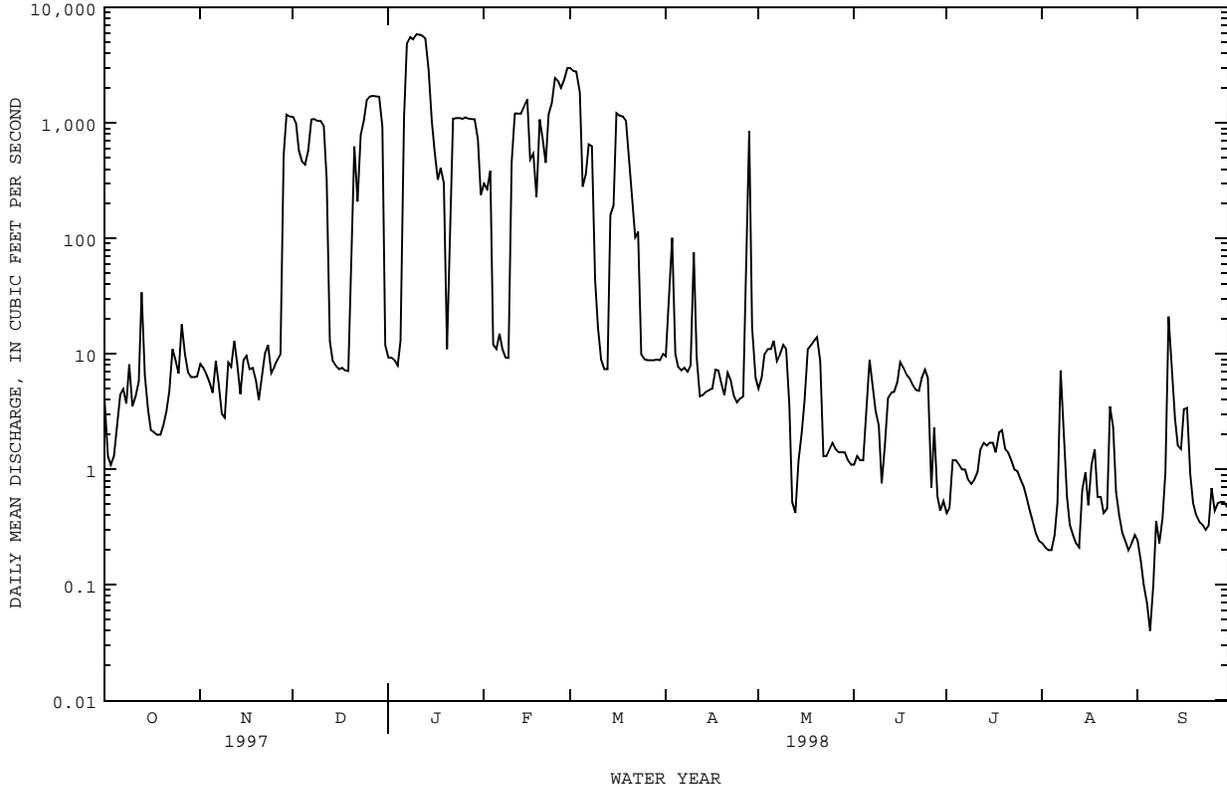
303129095360501 - LAKE CONROE SITE GC

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB										
24...	<.010	.101	<.020	--	.46	.016	.015	.05	120	13
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	<.010	.078	<.020	--	.57	.035	.027	.08	150	14
JUN										
25...	<.010	<.050	<.020	--	.43	<.010	<.010	--	<10	6.8
25...	<.010	<.050	<.020	--	.43	.010	<.010	--	<10	7.9
25...	--	--	--	--	--	--	--	--	--	--
25...	<.010	<.050	<.020	--	.46	.010	<.010	--	<10	17
AUG										
26...	<.010	<.050	.021	.46	.48	.014	.020	.06	<10	17
26...	<.010	<.050	.109	.54	.64	.025	.025	.08	<10	348
26...	<.010	<.050	.176	.48	.66	.028	.038	.12	26	452

08067650 WEST FORK SAN JACINTO RIVER BELOW LAKE CONROE NEAR CONROE, TX--Continued

SUMMARY STATISTICS	FOR 1998 WATER YEAR		WATER YEARS 1974 - 1998	
ANNUAL TOTAL	126530.30			
ANNUAL MEAN	347		230	
HIGHEST ANNUAL MEAN			595	1979
LOWEST ANNUAL MEAN			43.6	1981
HIGHEST DAILY MEAN	5850	Jan 10	43900	Oct 18 1994
LOWEST DAILY MEAN	.04	Sep 5	.00	Oct 26 1974
ANNUAL SEVEN-DAY MINIMUM	.14	Aug 31	.00	Aug 4 1976
INSTANTANEOUS PEAK FLOW	5880	Jan 10	8780	May 22 1983
INSTANTANEOUS PEAK STAGE	32.22	Jan 10	35.50	May 22 1983
ANNUAL RUNOFF (AC-FT)	251000		166400	
10 PERCENT EXCEEDS	1110		1170	
50 PERCENT EXCEEDS	6.9		8.9	
90 PERCENT EXCEEDS	.44		.00	

e Estimated



SAN JACINTO RIVER BASIN

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX

LOCATION.--Lat 30°14'40", long 95°27'25", Montgomery County, Hydrologic Unit 12040101, near right bank at downstream side of pier of bridge on Interstate Highway 45 and U.S. Highway 75, 300 ft upstream from Missouri Pacific Railroad Co. bridge, 3.5 mi downstream from Lake Creek, 4.2 mi south of Conroe, and at mile 79.

DRAINAGE AREA.--828 mi².

PERIOD OF RECORD.--May 1924 to Sep 1927, Jul 1939 to current year.

Water-quality records.--Chemical and biochemical analyses: Mar 1959 to Sep 1994. Pesticide analyses: May 1975 to Jun 1982. Sediment records: Feb 1966 to Sep 1967, Oct 1974 to Sep 1994. Specific conductance: Oct 1961 to Sep 1990. Water temperature: Oct 1961 to Sep 1990. Dissolved oxygen: Aug 1979 to May 1981.

REVISED RECORDS.--WSP 1058: 1926. WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 95.03 ft above sea level. May 7, 1924 to Sep 30, 1927, nonrecording gage at railroad bridge 285 ft downstream at datum 30.10 ft higher. Jul 13, 1939 to Sep 30, 1963, water-stage recorder at datum 5.0 ft higher. Satellite telemeter at station.

REMARKS.--Records good. Since Jan 9, 1973, at least 10% of contibuting drainage area has been regulated by Lake Conroe, capacity 518,200 acre-ft, 14.5 mi upstream from station. There are no large diversions above station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1925-27, 1940-72), prior to regulation by Lake Conroe, 477 ft³/s (345,600 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925-27, 1940-72).--Maximum discharge, 110,000 ft³/s Nov 25, 1940 (gage height, 30.85 ft), present datum, from rating curve extended above 43,000 ft³/s on basis of velocity-area studies; no flow Jun 14, 1956, and Sep 19 to Oct 1, 1965, result of temporary dams. Maximum stage since at least Dec 1913, that of Nov 25, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Dec 1913 reached a stage of 30.2 ft, present site and datum, from information by Missouri Pacific Railroad Co., discharge 101,000 ft³/s, from rating curve as explained above.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	77	1950	217	505	5880	85	128	33	23	16	37
2	44	75	1560	187	443	3420	75	103	32	23	16	25
3	38	66	1900	172	870	2700	196	90	32	22	18	21
4	33	81	1450	162	304	2340	93	82	31	22	19	19
5	34	69	1180	303	240	834	68	76	33	21	20	17
6	48	84	1180	2110	226	631	62	72	48	20	31	20
7	40	95	1340	14400	206	904	59	69	38	19	172	38
8	44	75	1560	16600	178	910	57	66	33	19	137	32
9	153	65	1470	15300	169	596	51	61	31	18	e60	26
10	100	84	1340	10300	448	398	52	57	30	17	e35	23
11	87	94	1230	6580	1850	259	124	55	29	17	28	384
12	344	173	713	5780	2190	206	44	53	29	16	26	707
13	539	339	270	5690	2540	183	40	51	27	16	25	376
14	678	241	169	4520	2060	245	40	52	27	19	27	286
15	232	174	145	2250	1810	314	39	52	27	24	40	204
16	196	188	131	1420	1240	1440	37	50	39	21	28	208
17	247	147	122	897	1220	2080	35	48	30	20	39	271
18	159	119	114	862	772	1840	64	46	27	21	81	227
19	97	119	109	787	1390	1670	75	44	26	20	55	145
20	79	104	130	412	1310	979	59	42	23	20	36	95
21	68	94	2130	328	800	548	54	41	22	19	31	62
22	62	86	790	1160	2350	298	52	41	22	20	35	43
23	114	80	1390	1470	2520	337	43	39	22	20	50	31
24	670	75	2200	2430	3630	172	37	38	22	19	65	25
25	218	72	2660	2550	3990	136	34	39	21	19	36	20
26	156	70	3500	1590	4240	117	31	38	24	17	30	17
27	121	68	3050	1380	4340	109	34	38	24	17	27	23
28	93	958	2050	1300	6220	102	990	37	25	17	23	16
29	79	3630	1790	1270	---	95	466	37	26	17	20	14
30	73	2350	1460	1110	---	90	185	35	28	16	20	12
31	78	---	339	627	---	97	---	33	---	16	49	---
TOTAL	4975	9952	39422	104164	48061	29930	3281	1713	861	595	1295	3424
MEAN	160	332	1272	3360	1716	965	109	55.3	28.7	19.2	41.8	114
MAX	678	3630	3500	16600	6220	5880	990	128	48	24	172	707
MIN	33	65	109	162	169	90	31	33	21	16	16	12
AC-FT	9870	19740	78190	206600	95330	59370	6510	3400	1710	1180	2570	6790

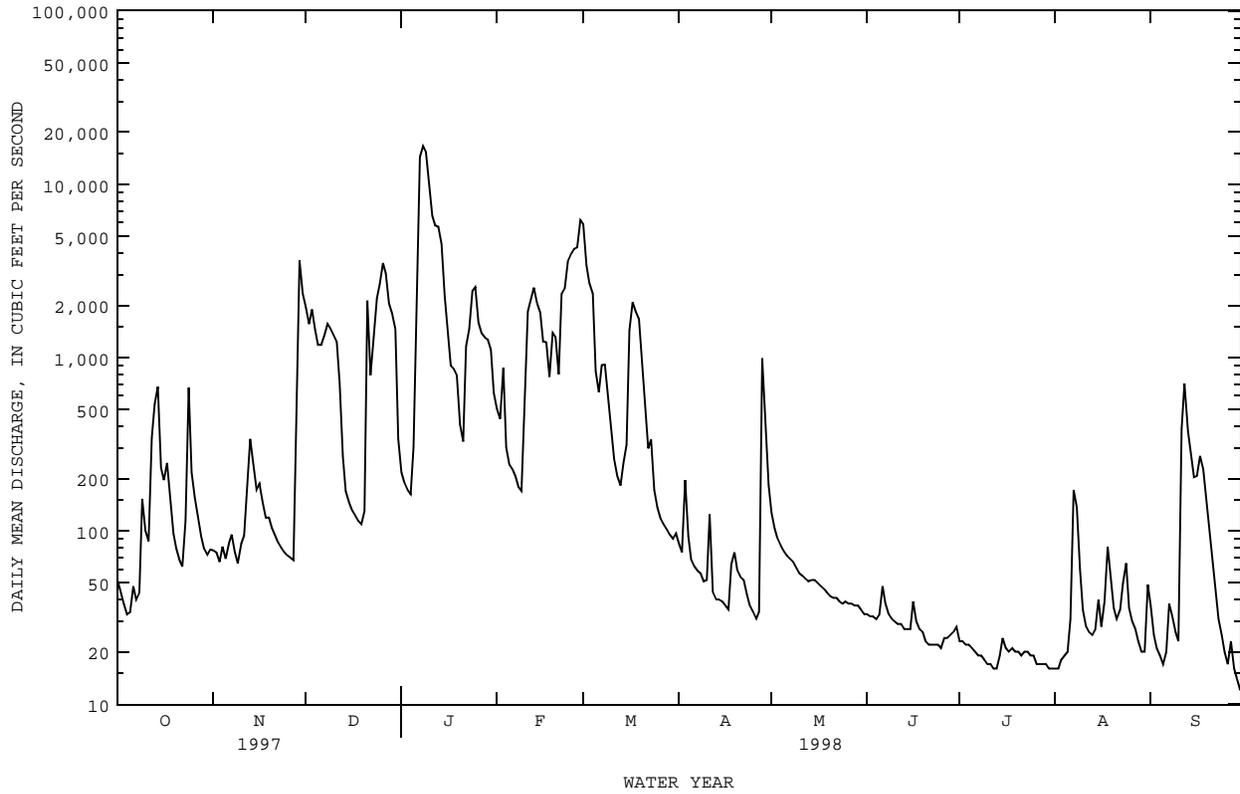
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1998z, BY WATER YEAR (WY)

	MEAN	528	415	665	960	940	684	747	722	640	117	80.1	244
MAX	7836	2080	2064	3360	3258	1705	4185	4153	2609	392	368	1945	
(WY)	1995	1975	1977	1998	1992	1995	1979	1983	1979	1989	1983	1979	
MIN	18.8	25.7	31.4	44.5	40.9	34.2	34.5	37.6	26.1	19.0	18.9	21.0	
(WY)	1991	1991	1981	1981	1996	1996	1996	1978	1996	1996	1981	1990	

08068000 WEST FORK SAN JACINTO RIVER NEAR CONROE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1973 - 1998z	
ANNUAL TOTAL	217528		247673			
ANNUAL MEAN	596		679		560	
HIGHEST ANNUAL MEAN					1444	1995
LOWEST ANNUAL MEAN					95.6	1996
HIGHEST DAILY MEAN	6510	Feb 23	16600	Jan 8	97200	Oct 18 1994
LOWEST DAILY MEAN	16	Aug 21	12	Sep 30	11	Aug 20 1981
ANNUAL SEVEN-DAY MINIMUM	19	Aug 16	16	Jul 27	11	Aug 18 1981
INSTANTANEOUS PEAK FLOW			17000	Jan 8	115000	Oct 18 1994
INSTANTANEOUS PEAK STAGE			21.43	Jan 8	32.30	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	431500		491300		405400	
10 PERCENT EXCEEDS	1930		1920		1500	
50 PERCENT EXCEEDS	135		79		95	
90 PERCENT EXCEEDS	30		20		24	

e Estimated
z Period of regulated streamflow.



SAN JACINTO RIVER BASIN

08068090 WEST FORK SAN JACINTO RIVER ABOVE LAKE HOUSTON NEAR PORTER, TX

LOCATION.--Lat 30°05'09", long 95°17'59", Montgomery County, Hydrologic Unit 12040101, on left bank, 4.4 mi southwest of Porter, 5.0 mi upstream from Spring Creek and 6.2 mi northwest of Humble.

DRAINAGE AREA.--962 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, at site 1.7 mi downstream, water years 1968-72, 1974-75. Feb to Mar 1984 (discharge measurements only), May 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 33 ft above sea level, from topographic map and levels. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in 1984, at least 10% of contributing drainage area has been regulated by Lake Conroe, capacity 518,200 acre-ft, 34.3 mi upstream of station. During periods of low base flow into Lake Houston, occasional releases are made from Lake Conroe in order to maintain water levels in Lake Houston, which has several large diversions. There are no large diversions upstream from station. There is only minor wastewater effluent being discharged by the city of Conroe and by other smaller communities into the river upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	85	2430	384	445	6520	135	174	36	29	22	134
2	66	72	1930	325	434	4250	120	137	35	27	22	62
3	61	68	2310	302	831	3010	134	118	34	28	23	33
4	54	74	2450	292	490	2740	196	104	34	28	24	28
5	52	87	1460	348	261	1360	111	98	35	27	25	26
6	47	87	1400	2050	250	660	96	93	41	25	33	27
7	64	103	1430	15100	214	842	91	90	51	25	104	33
8	69	98	2060	13000	180	979	85	86	42	25	388	40
9	252	78	1950	11100	161	798	78	81	37	23	149	34
10	375	86	1610	8820	295	488	71	76	34	22	85	34
11	168	126	1430	6830	2150	326	116	71	32	21	62	459
12	355	153	1060	6260	2280	245	91	69	32	21	52	1670
13	843	375	548	5670	2580	212	67	67	32	21	48	908
14	1210	354	299	5340	2360	223	65	66	31	22	49	478
15	576	241	245	3360	1930	426	65	69	29	31	61	325
16	279	217	222	1850	1650	1420	64	72	31	27	60	288
17	257	205	206	1060	1800	3150	61	68	39	25	52	331
18	234	164	197	821	1310	2350	74	60	32	25	82	318
19	148	159	187	775	1160	2090	128	58	29	27	107	227
20	103	155	226	529	1520	1450	104	61	27	25	84	158
21	84	132	4070	289	917	813	84	50	26	25	64	118
22	70	119	2220	731	3150	475	74	47	25	24	68	91
23	69	109	1870	1430	3410	377	70	47	25	25	73	74
24	673	100	3590	2080	3550	307	61	47	25	25	88	63
25	428	96	3030	2760	4360	198	56	46	25	23	81	56
26	193	89	3790	1840	5300	176	55	45	25	24	56	53
27	169	86	3810	1430	6040	164	56	44	26	23	48	56
28	124	283	2530	1270	5700	153	444	42	29	22	45	52
29	105	4750	2070	1230	---	143	908	42	28	23	42	46
30	95	3080	1910	1180	---	136	281	40	28	22	44	44
31	98	---	796	720	---	134	---	38	---	22	67	---
TOTAL	7388	11831	53336	99176	54728	36615	4041	2206	955	762	2208	6266
MEAN	238	394	1721	3199	1955	1181	135	71.2	31.8	24.6	71.2	209
MAX	1210	4750	4070	15100	6040	6520	908	174	51	31	388	1670
MIN	47	68	187	289	161	134	55	38	25	21	22	26
AC-FT	14650	23470	105800	196700	108600	72630	8020	4380	1890	1510	4380	12430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	967	412	895	1302	1209	1009	709	657	789	136	95.1	112			
MAX	10910	2259	1881	3199	3763	2041	2229	2174	3169	536	223	323			
(WY)	1995	1986	1992	1998	1992	1992	1991	1993	1993	1989	1995	1996			
MIN	22.2	29.8	42.7	138	69.3	57.4	73.0	59.4	31.8	24.6	30.5	33.5			
(WY)	1991	1991	1990	1996	1996	1996	1986	1988	1998	1998	1990	1990			

SUMMARY STATISTICS

	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1984 - 1998
ANNUAL TOTAL	274114	279512	
ANNUAL MEAN	751	766	695
HIGHEST ANNUAL MEAN			1694
LOWEST ANNUAL MEAN			157
HIGHEST DAILY MEAN	6800	Feb 23	15100 Jan 7
LOWEST DAILY MEAN	31	Aug 20	21 Jul 11
ANNUAL SEVEN-DAY MINIMUM	31	Sep 15	22 Jul 8
INSTANTANEOUS PEAK FLOW			16900 Jan 7
INSTANTANEOUS PEAK STAGE			28.41 Jan 7
ANNUAL RUNOFF (AC-FT)	543700	554400	503600
10 PERCENT EXCEEDS	2480	2290	1950
50 PERCENT EXCEEDS	218	104	113
90 PERCENT EXCEEDS	42	27	33

08068090 WEST FORK SAN JACINTO RIVER ABOVE LAKE HOUSTON NEAR PORTER, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Feb 1984 to current year. Pesticide analyses: Feb 1984 to Sep 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
FEB 18...	1545	1020	183	7.2	15.0	10.8	107	650	520	54
JUN 23...	0805	25	796	7.8	28.0	6.9	89	56	30	100
AUG 25...	1055	81	683	7.6	29.0	5.3	69	48	52	79

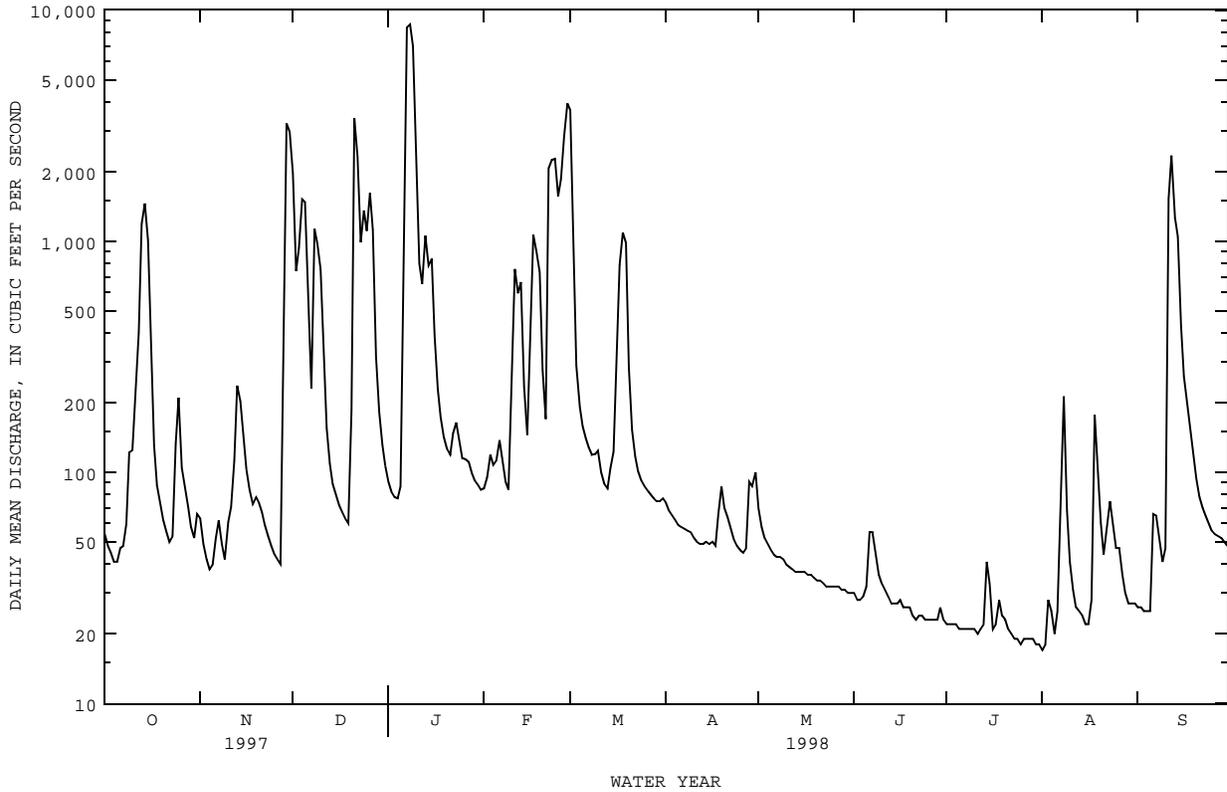
DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS-FIX END CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FEB 18...	10	18	2.2	14	.8	2.4	44	7.5	25	<.10
JUN 23...	--	34	4.5	112	5	5.9	110	27	150	.32
AUG 25...	5	25	4.0	95	5	5.3	74	23	130	.25

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NITRO-TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 18...	8.8	107	.238	.013	.251	.025	1.0	.76	.59
JUN 23...	19	427	.902	.087	.989	.172	1.8	.60	.43
AUG 25...	17	351	1.95	.057	2.01	.131	2.6	.51	.34

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 18...	.61	.78	.081	.026	.026	.08	14	820	18
JUN 23...	.60	.77	.438	.357	.359	1.1	5.8	<10	153
AUG 25...	.48	.64	.482	.440	.391	1.2	5.5	<10	28

08068500 SPRING CREEK NEAR SPRING, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	176760		125248			
ANNUAL MEAN	484		343		244	
HIGHEST ANNUAL MEAN					819	1941
LOWEST ANNUAL MEAN					13.4	1956
HIGHEST DAILY MEAN	6130	Mar 15	8680	Jan 8	55900	Oct 18 1994
LOWEST DAILY MEAN	23	Aug 20	17	Aug 1	1.1	Oct 23 1956
ANNUAL SEVEN-DAY MINIMUM	26	Sep 14	18	Jul 27	1.6	Oct 20 1956
INSTANTANEOUS PEAK FLOW			9120	Jan 8	76500	Oct 18 1994
INSTANTANEOUS PEAK STAGE			22.24	Jan 8	39.56	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	350600		248400		176400	
10 PERCENT EXCEEDS	1640		999		425	
50 PERCENT EXCEEDS	90		63		43	
90 PERCENT EXCEEDS	33		23		11	



SAN JACINTO RIVER BASIN

08068500 SPRING CREEK NEAR SPRING, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Aug 1983 to current year. Pesticide analyses: Aug 1983 to Sep 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
FEB 10...	0825	81	350	7.3	16.0	8.8	89	84	28	58
JUN 22...	1210	23	692	7.8	30.0	6.9	91	140	80	58
AUG 24...	1045	56	378	7.2	27.5	5.8	74	88	160	47

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS-FIX END CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FEB 10...	18	3.5	44	3	3.3	71	12	52	.15
JUN 22...	17	3.6	122	7	7.6	150	23	90	.43
AUG 24...	15	2.6	54	3	5.4	89	13	45	.26

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 10...	16	201	1.78	.029	1.81	.075	2.6	.72	.45
JUN 22...	15	403	7.17	.123	7.29	.167	8.2	.70	.70
AUG 24...	11	214	2.93	.075	3.00	.145	4.0	.82	.81

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 10...	.52	.79	.493	.348	.342	1.0	9.9	280	96
JUN 22...	.87	.87	1.35	1.28	1.26	3.9	6.9	53	89
AUG 24...	.96	.96	.746	.649	.607	1.9	12	53	46

08068720 CYPRESS CREEK AT KATY-HOCKLEY ROAD NEAR HOCKLEY, TX

LOCATION.--Lat 29°57'00", long 95°48'29", Harris County, Hydrologic Unit 12040102, on left bank at bridge on Katy-Hockley Road, 3.3 mi downstream from station 08068700, 5.6 mi southeast of Hockley, and 6.3 mi upstream from station 08068740.

DRAINAGE AREA.--110 mi².

PERIOD OF RECORD.--Jun 1975 to Jul 1983, Feb 1984 to current year.

GAGE.--Water-stage recorder and crest-stage gage. A concrete weir located 0.9 mi downstream from the gage, washed out on Aug 11, 1991. Datum of gage is 100.00 ft above sea level. Radio telemeter at station.

REMARKS.--Records poor. No known regulation. Diversions and return flow for irrigation occur upstream from station. Stage discharge relationship affected by seasonal vegetal growth during most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A flood in Jun 1960 reached a stage of 62.0 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	24	231	20	7.1	575	4.1	.92	e.00	.00	.00	e.00
2	.09	15	96	15	7.9	193	3.6	1.5	e.00	.00	.75	e.00
3	.07	9.8	247	13	9.6	101	3.4	1.7	e.00	.00	.97	e.00
4	.06	7.0	451	15	8.7	73	3.3	1.6	e.00	.00	.26	e.00
5	.93	5.4	351	52	7.2	58	3.0	1.5	e.50	.00	e.01	e.00
6	1.4	4.6	122	209	7.0	40	2.9	1.2	12	.00	e.00	e.00
7	.41	5.9	102	1040	8.2	28	2.6	.70	6.7	.00	e.00	e.00
8	8.2	4.2	474	1010	6.0	21	3.0	.47	3.4	.00	2.7	e.00
9	69	3.4	541	942	5.2	15	2.9	.50	1.3	.00	9.7	e.00
10	138	4.8	353	594	13	14	2.5	8.1	.24	.00	6.6	e.01
11	152	4.7	146	258	89	11	2.8	3.0	e.01	.00	4.6	469
12	289	17	85	140	46	8.6	2.6	1.1	e.00	.00	1.5	746
13	462	59	63	127	21	7.6	2.7	.31	e.00	.00	.18	773
14	605	44	50	80	13	8.7	2.4	.11	e.00	.00	.13	678
15	544	28	38	69	9.8	10	6.3	e.01	e.00	.00	.13	393
16	295	21	31	47	40	155	2.0	e.00	e.00	.00	e.05	263
17	120	17	26	34	228	402	1.5	e.00	e.00	.00	e.00	277
18	71	13	23	27	173	228	2.3	e.00	e.00	.00	e.00	121
19	50	12	29	20	64	81	2.8	e.00	e.00	.00	e.00	59
20	34	12	28	16	38	45	2.6	e.00	e.00	.00	e.00	35
21	24	10	69	15	32	30	3.1	e.00	e.00	.00	e.00	22
22	17	8.3	58	22	445	26	2.3	e.00	e.00	.00	e.01	14
23	16	6.5	42	29	624	20	1.7	e.00	e.00	.00	e.30	8.7
24	19	5.2	223	20	482	17	1.5	e.00	e.00	.00	.57	6.6
25	14	4.1	369	14	178	13	1.3	e.00	e.00	.00	.15	5.4
26	19	5.5	167	12	440	7.4	.96	e.00	e.00	.00	e.01	11
27	16	6.5	92	10	752	6.5	.78	e.00	e.00	.00	e.00	17
28	17	77	62	9.8	832	5.7	.88	e.00	e.00	.00	e.00	13
29	17	419	41	8.6	---	5.7	1.1	e.00	e.00	.00	e.00	9.2
30	14	458	26	7.6	---	4.4	1.0	e.00	e.00	.00	e.00	7.1
31	38	---	20	7.3	---	4.3	---	e.00	---	.00	e.00	---
TOTAL	3051.39	1311.9	4656	4883.3	4586.7	2214.9	73.92	22.72	24.15	0.00	28.62	3928.01
MEAN	98.4	43.7	150	158	164	71.4	2.46	.73	.81	.000	.92	131
MAX	605	458	541	1040	832	575	6.3	8.1	12	.00	9.7	773
MIN	.06	3.4	20	7.3	5.2	4.3	.78	.00	.00	.00	.00	.00
AC-FT	6050	2600	9240	9690	9100	4390	147	45	48	.00	57	7790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1998, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
MEAN	41.8	49.7	73.1	104	92.5	54.5	69.4	88.1	96.2	16.6	5.28	33.8													
MAX	367	229	257	508	534	196	344	377	375	98.7	24.8	358													
(WY)	1995	1986	1977	1979	1992	1992	1991	1993	1987	1979	1994	1979													
MIN	.090	.091	.000	.85	.000	.48	.10	.004	.22	.000	.019	.010													
(WY)	1989	1978	1989	1990	1976	1996	1987	1996	1988	1998	1988	1988													

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1975 - 1998

ANNUAL TOTAL	32615.04	24781.61		
ANNUAL MEAN	89.4	67.9		60.1
HIGHEST ANNUAL MEAN				186
LOWEST ANNUAL MEAN				5.01
HIGHEST DAILY MEAN	811	Mar 14	1040	Jan 7
LOWEST DAILY MEAN	.00	Jul 16	.00	May 16
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 20	.00	May 16
INSTANTANEOUS PEAK FLOW			1090	Jan 7
INSTANTANEOUS PEAK STAGE			58.49	Jan 7
ANNUAL RUNOFF (AC-FT)	64690	49150	43550	
10 PERCENT EXCEEDS	389	228	121	
50 PERCENT EXCEEDS	12	6.5	3.0	
90 PERCENT EXCEEDS	.00	.00	.00	

e Estimated

SAN JACINTO RIVER BASIN

08068740 CYPRESS CREEK AT HOUSE AND HAHL ROAD NEAR CYPRESS, TX

LOCATION.--Lat 29°57'32", long 95°43'03", Harris County, Hydrologic Unit 12040102, on right bank at bridge on House and Hahl Road, 1.4 mi southwest of Cypress, and 6.3 mi downstream from station 08068720.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--Jun 1975 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 100.00 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. Stage discharge relationship affected by seasonal vegetal growth during most years. Considerable diversions and return flow from irrigation occurs upstream from station, especially during the period Apr through Oct.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1908, about 49 ft in 1937, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	24	477	30	9.9	848	7.1	1.0	.84	1.1	5.0	.47
2	2.2	17	170	26	10	434	6.3	.96	.79	.87	1.9	.41
3	1.7	13	402	22	12	168	5.5	1.2	.88	1.3	1.0	.49
4	1.5	9.9	611	20	11	111	4.9	1.2	.82	2.0	1.2	.50
5	17	8.1	587	50	10	75	4.6	1.3	1.7	1.2	2.2	.53
6	22	7.0	289	201	9.2	48	4.2	1.3	17	.90	7.3	.65
7	11	6.9	168	1200	9.3	37	3.7	1.3	7.5	.76	8.5	.64
8	30	6.6	691	1430	7.9	28	3.3	1.3	4.7	.68	8.2	.79
9	200	5.6	746	1270	6.9	24	3.0	1.2	2.7	1.2	5.4	.73
10	277	7.6	620	962	18	23	2.7	3.4	1.5	1.2	4.0	.98
11	268	6.9	333	542	88	20	2.5	2.0	1.1	1.4	1.7	1000
12	495	28	139	259	64	17	3.0	1.3	.91	.89	1.2	1350
13	721	69	87	199	24	16	3.0	1.2	.88	.79	1.9	1100
14	943	59	61	123	17	17	3.1	1.2	.81	.79	3.3	925
15	780	38	50	93	14	20	6.6	1.0	.84	1.2	2.5	665
16	559	29	42	62	51	134	4.2	.96	.85	1.2	1.9	515
17	224	23	34	44	294	513	2.9	.92	.92	.79	8.5	487
18	106	20	29	34	281	416	5.5	.82	.84	.71	11	240
19	70	21	34	26	88	128	5.2	.82	.81	.92	2.5	92
20	43	19	113	22	46	62	2.3	.71	.93	1.2	1.2	51
21	29	17	558	21	33	33	2.7	.75	1.0	.79	1.1	29
22	21	15	301	23	640	29	2.2	.70	.96	.58	9.1	20
23	25	12	150	34	761	23	1.9	.71	.89	1.5	9.0	13
24	32	9.7	348	25	700	21	1.6	.84	.84	.61	2.1	12
25	23	7.9	533	20	387	18	1.5	.80	.86	.70	.86	9.8
26	22	6.4	386	17	591	13	1.4	.78	.95	.94	.73	10
27	21	7.1	159	15	897	11	1.5	.82	1.1	2.6	.65	22
28	20	215	91	14	967	9.8	2.2	.76	3.1	4.5	.54	18
29	20	630	59	13	---	9.4	1.7	.82	7.7	5.7	.47	12
30	15	629	38	11	---	8.3	1.1	.85	2.0	3.6	.45	9.7
31	34	---	29	10	---	7.6	---	.89	---	5.0	.55	---
TOTAL	5036.6	1967.7	8335	6818	6047.2	3322.1	101.4	33.81	66.72	47.62	105.95	6586.69
MEAN	162	65.6	269	220	216	107	3.38	1.09	2.22	1.54	3.42	220
MAX	943	630	746	1430	967	848	7.1	3.4	17	5.7	11	1350
MIN	1.5	5.6	29	10	6.9	7.6	1.1	.70	.79	.58	.45	.41
AC-FT	9990	3900	16530	13520	11990	6590	201	67	132	94	210	13060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1998, BY WATER YEAR (WY)

MEAN	52.6	62.1	98.8	129	118	69.7	92.9	117	132	25.0	16.0	55.8
MAX	396	254	336	685	649	257	463	513	625	120	214	537
(WY)	1995	1986	1977	1979	1992	1995	1991	1993	1993	1979	1983	1979
MIN	.95	.27	.26	1.65	.065	1.27	.16	.35	.93	1.20	1.55	.86
(WY)	1989	1978	1989	1996	1976	1986	1987	1996	1988	1996	1988	1988

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1975 - 1998

ANNUAL TOTAL	48037.84	38468.79	
ANNUAL MEAN	132	105	80.2
HIGHEST ANNUAL MEAN			255
LOWEST ANNUAL MEAN			9.49
HIGHEST DAILY MEAN	990	Mar 13	1430
LOWEST DAILY MEAN	.74	Sep 8	.41
ANNUAL SEVEN-DAY MINIMUM	.96	Sep 2	.48
INSTANTANEOUS PEAK FLOW			1660
INSTANTANEOUS PEAK STAGE			45.42
ANNUAL RUNOFF (AC-FT)	95280	76300	58110
10 PERCENT EXCEEDS	580	423	174
50 PERCENT EXCEEDS	18	9.7	5.6
90 PERCENT EXCEEDS	1.6	.82	.33

08068780 LITTLE CYPRESS CREEK NEAR CYPRESS, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°00'57", long 95°41'50", Harris County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Cypress-Rosehill Road, 3.2 mi north of Cypress, and 6.9 mi upstream from mouth.

DRAINAGE AREA.--41.0 mi².

PERIOD OF RECORD.--May 1982 to Sep 30, 1992 (daily mean discharge). Oct 1, 1992 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 80.00 ft above sea level, 1973 adjustment. Radio telemeter at station.

REMARKS.--Records good. No known regulation or diversions.

AVERAGE DISCHARGE.--10 years (water years 1983-92) 24.0 ft³/s (17,370 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 4,520 ft³/s Oct 18, 1994 (gage height 81.41 ft).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 13	2300	549	75.10	Jan 7	1100	2,170	79.20
Nov 29	1100	663	75.75	Feb 22	1600	534	75.00
Dec 8	1200	502	74.78	Feb 26	2300	568	75.22
Dec 21	0400	457	74.45	Sep 11	2230	1,290	77.89

SAN JACINTO RIVER BASIN

08068800 CYPRESS CREEK AT GRANT ROAD NEAR CYPRESS, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°58'24", long 95°35'54", Harris County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Grant Road and 6.0 mi east of Cypress.

DRAINAGE AREA.--214 mi².

PERIOD OF RECORD.--May 1982 (discharge measurements only). Oct 1982 to Sep 30, 1992 (daily mean discharge). Oct 1, 1992 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder. Datum of gage is 80.00 ft above sea level, 1973 adjustment. Radio telemeter at station.

REMARKS.--Records good. No known regulation or diversions. Base flow sustained by effluent from urbanized farming areas in the basin.

AVERAGE DISCHARGE.--10 years (water years 1983-92) 116 ft³/s (83,910 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft³/s Oct 18, 1994 (gage height 47.38 ft).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 8	1000	2,710	39.32	Sep 11	1130	3,710	42.40

08068900 CYPRESS CREEK AT STUEBNER-AIRLINE ROAD NEAR WESTFIELD, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 30°00'23", long 95°30'42", Harris County, Hydrologic Unit 12040102, on right bank at downstream side of bridge on Stuebner-Airline Road, 1.3 mi upstream from Spring Gulley, and 6.5 mi west of Westfield.

DRAINAGE AREA.--248 mi².

PERIOD OF RECORD.--Jun 1982 to May 1986 and Feb to Sep 1987 (gage heights and discharge measurements only). Oct 1987 to Sep 1989 (daily mean discharge). Oct 1989 to Sep 1992 (annual maximum gage height and discharge). Oct 1992 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 70.00 ft above sea level, 1973 adjustment. Radio telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Low flow is sustained by wastewater effluent from urbanized areas and drainage from irrigated farm land.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s Oct 19, 1994 (gage height, 39.61 ft).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 28	1630	2,900	27.63	Feb 22	0315	2,320	25.71
Dec 7	2200	2,460	26.14	Aug 17	1615	2,020	24.70
Dec 20	2245	4,430	31.56	Sep 11	1245	6,410	34.62
Jan 6	2215	4,890	32.46				

SAN JACINTO RIVER BASIN

08069000 CYPRESS CREEK NEAR WESTFIELD, TX

LOCATION.--Lat 30°02'08", long 95°25'43", Harris County, Hydrologic Unit 12040102, on left bank at downstream side of downstream bridge on Interstate Highway 45 and U.S. Highway 75, 0.9 mi upstream from Senger Gully, 1.8 mi northwest of Westfield, 2.0 mi upstream from Missouri Pacific Railroad Co. bridge, and 11.0 mi upstream from mouth.

DRAINAGE AREA.--285 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jul 1944 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 63.89 ft above sea level, unadjusted for land-surface subsidence. Prior to Mar 17, 1951, water-stage recorder at upstream side of bridge at datum 12.00 ft higher. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Low flow is maintained by wastewater effluent. Channel below gage was rectified in 1950-51, 1975, and 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 34 ft May 1929 (discharge, 26,000 ft³/s), present datum, from information by local resident. Flood in Nov 1940 reached a stage of about 32 ft, present datum (discharge, 15,000 ft³/s), from information by State Department of Highways and Public Transportation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 13	1215	4,300	14.97	Jan 6	2315	9,150	23.01
Nov 28	1830	4,660	15.72	Feb 22	0430	3,710	13.69
Dec 3	0730	2,600	11.12	Feb 26	0915	3,160	12.44
Dec 8	0015	3,770	13.83	Sep 11	1345	6,900	21.53
Dec 21	0145	6,390	18.95				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	62	798	55	45	1340	35	29	26	34	e29	35
2	78	52	450	53	62	983	32	28	26	30	e29	31
3	69	46	1540	47	60	436	32	28	26	38	e180	30
4	69	38	1030	46	45	241	32	29	28	46	e100	29
5	449	68	843	74	74	178	33	31	e60	33	42	27
6	174	43	576	2780	62	136	34	e30	e200	31	61	138
7	165	30	723	5620	52	103	32	e30	e60	30	176	115
8	247	28	2430	3410	46	89	33	e29	e35	29	99	45
9	712	28	1560	2590	45	74	30	e28	e30	29	49	34
10	464	100	1070	1710	584	63	29	e32	e28	28	36	125
11	1140	45	648	1170	303	59	29	e30	e27	28	33	5200
12	1090	315	325	553	205	52	29	e29	e26	28	50	4690
13	2760	208	182	342	115	50	30	e28	e25	30	143	3340
14	2410	148	124	370	75	161	31	27	e25	104	114	1540
15	1610	118	93	249	61	131	29	25	44	85	43	888
16	1030	88	75	169	562	572	29	24	63	35	34	1080
17	573	61	61	117	671	607	32	24	31	37	351	542
18	278	87	53	91	540	668	154	24	27	65	195	310
19	173	88	53	74	372	433	71	24	26	42	62	191
20	123	50	488	64	166	196	41	24	25	39	79	120
21	87	42	4150	57	151	112	34	25	26	33	144	90
22	65	38	1370	89	2710	79	31	27	26	32	247	57
23	107	35	1190	74	1830	72	29	25	32	34	126	44
24	138	32	987	76	1300	59	29	25	40	37	117	37
25	81	27	655	63	891	52	29	26	25	35	56	33
26	59	26	650	74	2070	47	29	28	32	35	45	65
27	66	26	424	50	1990	42	37	32	27	34	36	49
28	58	1320	234	44	1650	38	89	29	105	32	35	41
29	51	1910	145	42	---	36	37	24	46	30	32	36
30	50	1300	101	41	---	35	31	24	37	30	31	31
31	44	---	68	41	---	45	---	25	---	e30	74	---
TOTAL	14507	6459	23096	20235	16737	7189	1172	843	1234	1183	2848	18993
MEAN	468	215	745	653	598	232	39.1	27.2	41.1	38.2	91.9	633
MAX	2760	1910	4150	5620	2710	1340	154	32	200	104	351	5200
MIN	44	26	53	41	45	35	29	24	25	28	29	27
AC-FT	28770	12810	45810	40140	33200	14260	2320	1670	2450	2350	5650	37670

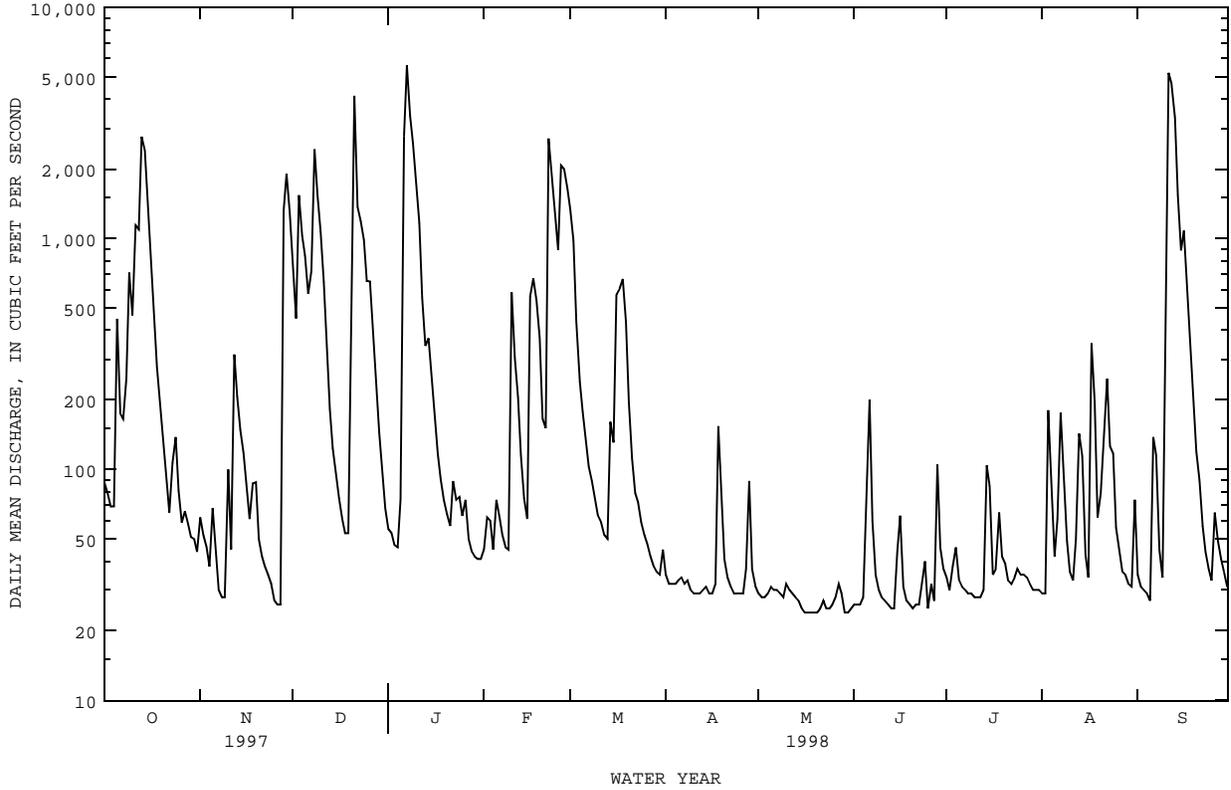
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEAR (WY)

MEAN	167	162	193	242	242	127	214	275	248	84.2	61.6	142
MAX	1768	1788	931	1168	1322	787	1133	1260	1157	588	563	862
(WY)	1995	1947	1992	1979	1992	1997	1973	1953	1960	1960	1945	1961
MIN	.13	.023	.15	.60	1.39	.21	1.50	1.77	1.64	.26	.087	1.21
(WY)	1957	1956	1951	1951	1951	1956	1963	1956	1958	1958	1948	1956

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1944 - 1998	
ANNUAL TOTAL	152212		114496		179	
ANNUAL MEAN	417		314		510	
HIGHEST ANNUAL MEAN					7.53	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	4150	Dec 21	5620	Jan 7	15600	Oct 8 1949
LOWEST DAILY MEAN	23	Sep 6	24	May 16	.00	Aug 3 1948
ANNUAL SEVEN-DAY MINIMUM	26	Sep 13	24	May 15	.00	Aug 3 1948
INSTANTANEOUS PEAK FLOW			9150	Jan 6	22100	Oct 8 1949
INSTANTANEOUS PEAK STAGE			23.01	Jan 6	33.44	Oct 8 1949
ANNUAL RUNOFF (AC-FT)	301900		227100		130000	
10 PERCENT EXCEEDS	1220		985		411	
50 PERCENT EXCEEDS	123		55		27	
90 PERCENT EXCEEDS	33		28		1.6	

e Estimated



SAN JACINTO RIVER BASIN

08069000 CYPRESS CREEK NEAR WESTFIELD, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Mar 1959 to Apr 1964, Oct 1977 to Jun 1978, Aug 1983 to current year. Chemical and biochemical analyses: Aug 1983 to current year. Pesticide analyses: Aug 1983 to Sep 1990. Sediment analyses: Oct 1976 to Sep 1979. Oct 1986 to Apr 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
FEB 10...	0725	41	608	7.8	17.5	8.5	90	620	700	91
JUN 22...	1120	25	850	8.2	31.0	5.5	74	2000	68	100
AUG 24...	0945	130	338	7.3	28.0	5.3	68	720	1200	66

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FEB 10...	29	4.7	83	4	6.8	160	22	65	.41
JUN 22...	32	5.3	135	6	11	200	30	100	.65
AUG 24...	21	3.0	36	2	6.6	86	12	30	.26

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 10...	15	351	5.47	.110	5.58	.426	7.0	1.0	.62
JUN 22...	18	488	5.98	.210	6.19	.212	7.3	.94	.85
AUG 24...	14	189	2.47	.091	2.56	.157	3.7	1.0	.83

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 10...	1.0	1.5	1.73	1.64	1.54	4.7	8.6	23	26
JUN 22...	1.1	1.2	2.64	2.54	2.54	7.8	7.7	<10	<4.0
AUG 24...	.99	1.2	1.13	.935	.870	2.7	14	38	7.8

8070000 EAST FORK SAN JACINTO RIVER NEAR CLEVELAND, TX

LOCATION.--Lat 30°20'11", long 95°06'14", Liberty County, Hydrologic Unit 12040103, near left bank at downstream side of bridge on State Highway 105, 1,880 ft downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 1.2 mi west of Cleveland, and 4.3 mi downstream from Winter Creek.

DRAINAGE AREA.--325 mi².

PERIOD OF RECORD.--Apr 1939 to current year.

Water-quality records.--Chemical analyses: Sep 1961 to Apr 1964, Jan 1968 to Sep 1989. Biochemical analyses: Aug 1983 to Sep 1989. Pesticide analyses: Jan to Aug 1984.

GAGE.--Water-stage recorder. Datum of gage is 107.98 ft above sea level. Prior to Sep 13, 1955, at site 1,800 ft upstream at datum 5.00 ft higher. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 5, 1935, reached a stage of 23.6 ft (discharge, 53,500 ft³/s), present site and datum, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 8	Unknown	e24500	20.80	Feb 24	2315	2,770	14.46
Jan 25	0015	2,730	14.40	Feb 28	0700	5,180	16.49

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	39	1560	105	193	3460	114	83	29	e21	e12	28
2	28	36	288	97	217	1220	103	71	29	e21	e12	27
3	28	35	413	93	383	347	100	66	29	e23	e16	25
4	28	34	1240	92	332	258	95	59	29	e21	e15	24
5	28	51	1670	152	223	223	89	55	33	e19	e18	24
6	28	117	1040	654	195	202	86	53	41	e18	30	23
7	33	94	244	e8980	164	195	85	52	47	e17	61	23
8	48	49	339	e19000	145	209	84	50	38	e17	111	29
9	313	42	456	e6300	136	189	80	e48	34	e16	43	27
10	314	62	291	3180	218	164	75	e46	31	e16	35	27
11	117	210	171	1170	935	149	72	45	30	e15	30	241
12	151	183	119	863	1280	137	71	44	29	e14	26	768
13	193	283	95	1300	1210	132	72	42	e26	e15	26	796
14	351	292	83	647	607	143	72	44	e24	e16	32	721
15	259	179	75	695	300	235	72	45	e24	e16	33	398
16	121	130	69	593	299	580	71	45	e24	e16	27	260
17	71	103	65	370	859	1570	68	43	e23	e16	27	181
18	52	88	62	273	1230	2310	73	42	e22	e16	27	130
19	45	95	59	226	1330	1990	101	41	e21	e17	27	92
20	40	89	154	198	740	828	86	40	e21	e16	26	72
21	38	78	2070	192	311	284	84	39	e20	e16	31	61
22	36	69	1730	740	914	208	76	38	e20	e15	35	54
23	36	60	1570	1510	1690	174	71	38	e20	e14	32	49
24	300	54	1810	2360	2470	155	67	38	e20	e14	51	45
25	108	51	1460	2320	2570	143	63	38	e20	e14	47	41
26	72	48	1180	768	1920	133	62	37	e20	e14	36	41
27	55	48	560	355	2630	125	66	36	e20	e15	31	46
28	45	190	285	256	4860	121	164	33	e22	e14	28	50
29	42	1510	203	212	---	117	149	31	e21	e13	26	41
30	41	1760	156	190	---	112	113	30	e21	e13	26	37
31	40	---	126	191	---	111	---	30	---	e12	30	---
TOTAL	3090	6079	19643	54082	28361	16224	2584	1402	788	500	1007	4381
MEAN	99.7	203	634	1745	1013	523	86.1	45.2	26.3	16.1	32.5	146
MAX	351	1760	2070	19000	4860	3460	164	83	47	23	111	796
MIN	28	34	59	92	136	111	62	30	20	12	12	23
AC-FT	6130	12060	38960	107300	56250	32180	5130	2780	1560	992	2000	8690
CFSM	.31	.62	1.95	5.37	3.12	1.61	.27	.14	.08	.05	.10	.45
IN.	.35	.70	2.25	6.19	3.25	1.86	.30	.16	.09	.06	.12	.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

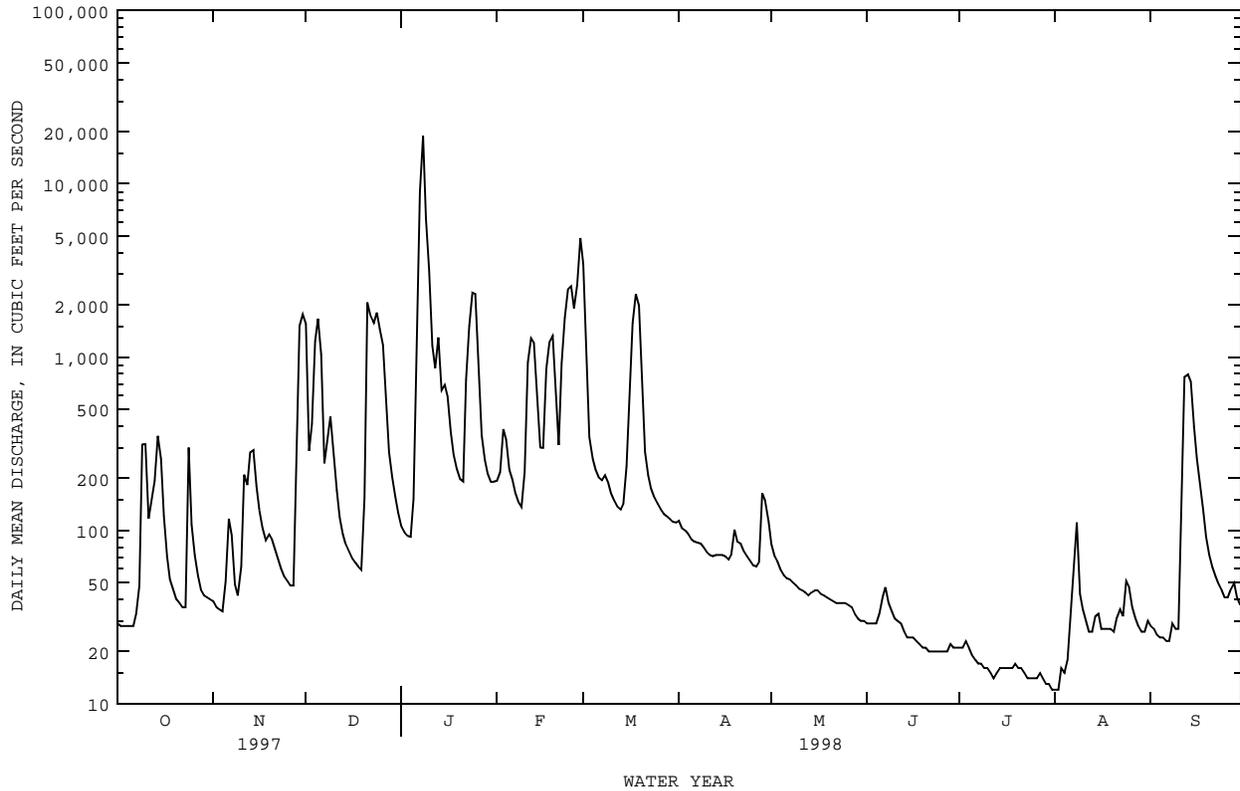
	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
MEAN	151	260	267	391	399	274	343	300	261	88.6	51.9	85.2
MAX	2964	3101	1613	1745	1336	748	2302	1473	2023	676	939	894
(WY)	1995	1941	1941	1998	1992	1973	1945	1983	1983	1989	1983	1961
MIN	5.61	9.58	14.6	13.0	20.3	17.1	15.5	18.1	12.0	5.70	5.51	4.46
(WY)	1957	1957	1957	1957	1971	1971	1971	1963	1954	1971	1956	1956

SAN JACINTO RIVER BASIN

08070000 EAST FORK SAN JACINTO RIVER NEAR CLEVELAND, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	105040		138141			
ANNUAL MEAN	288		378		238	
HIGHEST ANNUAL MEAN					733	1941
LOWEST ANNUAL MEAN					22.8	1971
HIGHEST DAILY MEAN	2760	Feb 15	19000	Jan 8	44200	Oct 18 1994
LOWEST DAILY MEAN	17	Sep 19	12	Jul 31	3.0	Aug 23 1956
ANNUAL SEVEN-DAY MINIMUM	19	Sep 14	13	Jul 27	3.2	Aug 19 1956
INSTANTANEOUS PEAK FLOW			e24500	Jan 8	63000	Oct 18 1994
INSTANTANEOUS PEAK STAGE					24.57	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	208300		274000		172200	
ANNUAL RUNOFF (CFSM)	.89		1.16		.73	
ANNUAL RUNOFF (INCHES)	12.02		15.81		9.93	
10 PERCENT EXCEEDS	889		977		487	
50 PERCENT EXCEEDS	95		71		49	
90 PERCENT EXCEEDS	25		20		14	

e Estimated



08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX

LOCATION.--Lat 30°08'43", long 95°07'27", Montgomery County, Hydrologic Unit 12040103, on right bank at downstream side of bridge on Farm Road 1485, 1.0 mi upstream from Church House Gully, 5.5 mi east of New Caney, and 5.9 mi upstream from Caney Creek.

DRAINAGE AREA.--388 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1952-58, 1969-76, 1983-84. May 1984 to current year (daily mean discharges).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 43.98 ft above sea level (Texas Highway Department benchmark). Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. No known regulation or diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jun 1973 reached a stage of 29.6 ft, from floodmark on left bank, identified by local resident. Flood in Nov 1940 may have been slightly higher.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 21	1900	5,070	17.26	Jan 26	0400	2,750	13.67
Jan 8	2115	20,600	26.03	Feb 26	1745	4,090	15.89

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	55	1630	252	247	e4090	133	123	34	25	12	21
2	32	51	1560	226	246	e3240	130	94	33	23	12	23
3	30	48	658	212	317	1510	121	81	32	24	12	20
4	28	44	706	205	470	607	116	73	31	23	12	18
5	27	66	1170	211	360	417	109	68	30	21	16	16
6	27	142	1590	540	268	322	103	64	36	22	12	15
7	31	132	1130	2620	232	275	100	63	42	22	18	15
8	36	106	611	10900	198	262	98	62	51	19	42	15
9	93	71	584	14100	175	258	95	60	40	18	101	17
10	278	68	559	6630	253	228	91	57	35	17	48	21
11	247	96	386	3650	734	199	85	55	33	16	35	90
12	151	217	267	1640	1110	181	81	52	31	16	30	382
13	277	230	208	1380	1360	167	79	51	30	15	25	702
14	304	283	177	1490	1290	170	79	50	28	17	23	872
15	310	255	160	885	662	204	81	49	27	16	31	869
16	222	178	146	845	403	440	82	49	27	17	30	448
17	129	138	138	670	712	1070	78	49	27	20	21	291
18	92	118	132	430	1050	1740	78	48	25	19	20	203
19	74	115	127	331	1290	2310	84	46	24	18	21	140
20	64	115	239	281	1370	2050	111	44	23	22	23	100
21	57	107	4410	255	785	903	97	43	23	21	23	78
22	53	96	3930	348	1150	358	93	42	22	17	28	65
23	54	88	2350	871	1390	259	85	41	22	16	42	56
24	53	80	2170	1550	1860	218	78	40	21	15	30	50
25	235	75	2130	2350	2480	194	72	39	21	14	45	46
26	114	70	1720	2400	3550	177	70	39	21	14	52	44
27	86	66	1350	976	3010	163	68	39	21	14	34	45
28	73	112	765	462	e2970	153	77	38	25	16	27	45
29	62	435	463	330	---	144	195	38	23	15	23	49
30	61	1220	352	277	---	138	162	37	23	13	20	42
31	64	---	293	245	---	132	---	36	---	13	19	---
TOTAL	3399	4877	32111	57562	29942	22579	2931	1670	861	558	887	4798
MEAN	110	163	1036	1857	1069	728	97.7	53.9	28.7	18.0	28.6	160
MAX	310	1220	4410	14100	3550	4090	195	123	51	25	101	872
MIN	27	44	127	205	175	132	68	36	21	13	12	15
AC-FT	6740	9670	63690	114200	59390	44790	5810	3310	1710	1110	1760	9520
CFSM	.28	.42	2.67	4.79	2.76	1.88	.25	.14	.07	.05	.07	.41
IN.	.33	.47	3.08	5.52	2.87	2.16	.28	.16	.08	.05	.09	.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

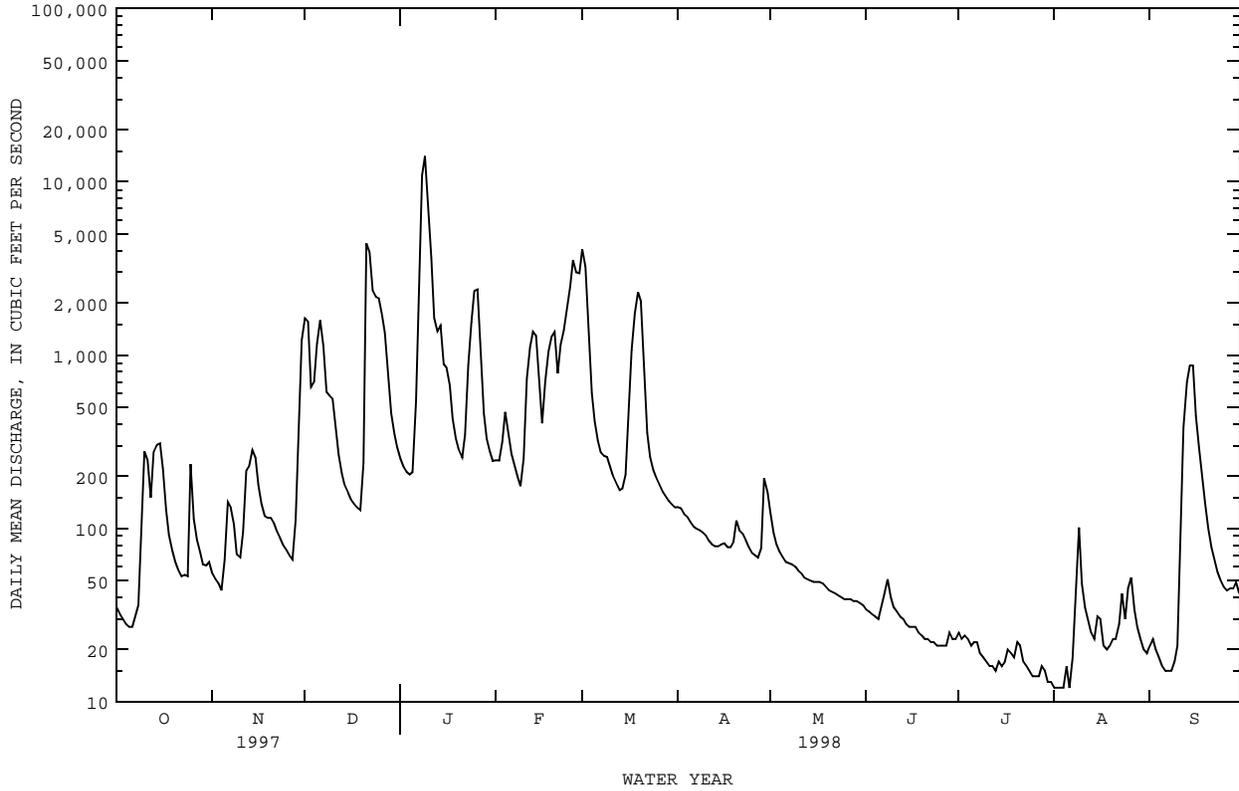
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	273	167	403	616	577	516	333	322	359	148	46.8	63.8			
MAX	2843	626	1036	1857	1557	981	958	1330	1596	849	189	186			
(WY)	1995	1986	1998	1998	1992	1991	1989	1986	1988	1989	1995	1996			
MIN	15.7	20.6	31.2	99.5	74.0	55.2	68.8	42.3	28.5	18.0	20.8	17.6			
(WY)	1989	1991	1990	1986	1996	1996	1986	1996	1996	1998	1990	1988			

SAN JACINTO RIVER BASIN

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1984 - 1998	
ANNUAL TOTAL	134465		162175			
ANNUAL MEAN	368		444		319	
HIGHEST ANNUAL MEAN					660	1995
LOWEST ANNUAL MEAN					101	1996
HIGHEST DAILY MEAN	4410	Dec 21	14100	Jan 9	46600	Oct 19 1994
LOWEST DAILY MEAN	19	Sep 17	12	Aug 1	9.8	Nov 1 1990
ANNUAL SEVEN-DAY MINIMUM	19	Sep 15	13	Jul 29	10	Oct 29 1990
INSTANTANEOUS PEAK FLOW			20600	Jan 8	74100	Oct 19 1994
INSTANTANEOUS PEAK STAGE			26.03	Jan 8	33.00	Oct 19 1994
ANNUAL RUNOFF (AC-FT)	266700		321700		230900	
ANNUAL RUNOFF (CFSM)	.95		1.15		.82	
ANNUAL RUNOFF (INCHES)	12.89		15.55		11.16	
10 PERCENT EXCEEDS	1190		1290		812	
50 PERCENT EXCEEDS	138		85		83	
90 PERCENT EXCEEDS	30		20		25	

e Estimated



08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Aug 1983 to current year. Pesticide analyses: Aug 1985 to Sep 1990.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Jun 1984 to current year.

WATER TEMPERATURE: Jun 1984 to current year.

INSTRUMENTATION.--From Jun 1984 to current year, a water-quality monitor continuously records specific conductance and water temperature at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1989 to 1998. The standard error of estimate for dissolved solids is 5%, chloride is 13%, sulfate is 30% and for hardness is 15%. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 870 microsiemens, May 7, 1985; minimum, 19 microsiemens, Nov 17, 1992.

WATER TEMPERATURE: Maximum, 32.0°C, Jun 29, 1996; minimum, 1.0°C, Dec 24, 1989.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 299 microsiemens, May 4; minimum, 43 microsiemens, Jan 10.

WATER TEMPERATURE: Maximum, 31.8°C, Jun 19; minimum, 8.1°C, Dec 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
FEB 10...	1045	166	200	7.1	13.5	9.4	90	20	92	51
MAY 18...	1015	--	--	--	--	--	--	--	--	--
JUN 23...	0910	22	194	7.5	28.0	6.2	79	48	190	39
AUG 25...	1210	35	158	7.3	27.5	5.1	64	170	120	27

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS-FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 10...	15	17	2.1	17	1	1.4	36	6.1	31
MAY 18...	--	--	--	--	--	--	--	--	--
JUN 23...	5	12	2.0	21	1	1.5	34	4.1	33
AUG 25...	4	8.2	1.6	18	1	1.5	23	4.6	29

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 10...	<.10	15	112	<.010	.197	<.020	.65	--	--
MAY 18...	--	--	--	--	--	--	--	--	--
JUN 23...	<.10	11	106	<.010	.195	.025	.49	.27	.15
AUG 25...	<.10	13	91	<.010	.338	<.020	.70	--	--

SAN JACINTO RIVER BASIN

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB 10...	.29	.45	.034	<.010	.025	.08	8.5	170	54
MAY 18...	--	--	--	--	--	--	--	--	--
JUN 23...	.18	.30	.045	.022	.020	.06	3.9	17	74
AUG 25...	.19	.36	.107	.042	.048	.15	4.1	14	54

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1997 TO SEPTEMBER 1998

MONTH YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- SIEMENS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1997	3399	142	83	762	22	204	4.6	42.6	35
NOV. 1997	4877	148	86	1130	24	313	4.6	60.7	35
DEC. 1997	32111	121	71	6170	18	1520	4.4	379	30
JAN. 1998	57562	64	39	6040	8.2	1270	2.8	429	17
FEB. 1998	29942	103	61	4930	15	1180	3.9	314	26
MAR. 1998	22579	120	71	4320	18	1080	4.3	261	30
APR. 1998	2931	221	125	987	40	316	5.2	41.3	49
MAY 1998	1670	231	130	585	43	192	5.1	23.1	50
JUNE 1998	861	201	115	267	35	81.1	5.3	12.3	46
JULY 1998	558	200	114	172	34	51.9	5.3	8.0	46
AUG. 1998	887	160	93	222	26	61.3	5.0	11.9	38
SEPT 1998	4798	121	71	926	18	232	4.3	55.9	30
TOTAL	162175	**	**	26510	**	6500	**	1640	**
WTD.AVG.	444	102	61	**	15	**	3.7	**	26

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	160	155	157	191	176	187	105	83	91	123	117	120
2	161	158	159	192	185	189	126	105	116	127	123	125
3	166	158	163	187	183	185	128	107	117	132	126	129
4	171	165	167	187	183	186	128	108	118	134	132	134
5	173	169	171	185	139	173	111	96	101	141	133	136
6	180	173	176	145	120	129	105	96	100	145	92	134
7	189	180	183	153	124	139	111	97	99	92	66	72
8	192	177	187	152	137	144	107	92	96	67	56	63
9	180	139	168	164	142	153	117	107	113	56	45	48
10	147	82	120	165	150	158	134	115	127	45	43	44
11	101	88	95	157	140	150	147	134	140	55	44	49
12	134	100	122	158	116	135	158	146	153	66	54	62
13	124	98	115	166	118	148	166	158	161	73	62	68
14	133	99	113	183	159	171	173	166	171	79	67	73
15	159	133	141	208	165	192	175	167	173	95	79	87
16	181	146	158	214	198	205	178	173	177	97	93	95
17	197	177	182	216	205	211	179	177	178	101	93	97
18	219	188	199	212	204	207	181	178	179	111	101	105
19	237	219	232	212	204	208	184	180	182	117	111	114
20	242	233	239	217	206	211	184	86	174	121	117	119
21	240	224	232	208	202	205	130	98	104	125	121	123
22	224	219	221	208	198	203	126	104	113	125	122	124
23	220	191	210	202	193	197	152	126	138	125	82	106
24	203	196	200	201	195	199	146	134	142	82	72	74
25	202	82	139	208	200	205	138	124	133	74	67	70
26	92	84	88	213	203	206	143	131	137	70	66	68
27	109	92	101	212	204	208	142	140	141	87	70	78
28	118	108	113	213	108	182	150	141	145	99	87	93
29	129	113	122	150	78	126	150	91	100	109	99	103
30	140	129	135	88	69	78	110	103	106	116	109	112
31	176	135	154	---	---	---	117	110	114	121	116	118
MONTH	242	82	160	217	69	176	184	83	134	145	43	95
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	125	120	123	---	---	e90	207	203	205	230	143	178
2	131	125	127	---	---	e111	209	204	207	298	230	275
3	133	129	131	---	---	e119	208	206	207	298	283	290
4	181	126	159	128	119	123	209	204	206	299	263	282
5	187	181	186	141	131	134	218	209	212	264	258	261
6	191	187	189	158	141	150	225	218	223	258	250	254
7	197	190	194	170	158	163	224	217	221	251	236	245
8	197	194	196	179	169	173	223	217	220	238	226	230
9	199	197	198	185	179	182	227	223	225	227	223	225
10	201	162	188	196	185	190	230	226	228	226	222	224
11	162	132	139	202	196	199	228	225	227	224	219	221
12	135	123	126	206	200	205	227	223	225	228	216	223
13	161	123	127	209	205	208	230	224	228	223	216	219
14	125	116	120	208	203	206	234	229	231	220	216	218
15	132	116	123	203	189	198	235	232	234	220	216	219
16	143	132	138	198	138	174	235	230	233	227	218	221
17	136	122	127	152	117	138	231	227	228	237	220	227
18	135	118	125	117	89	99	227	222	224	243	222	233
19	120	116	118	101	89	95	228	221	225	228	221	224
20	116	111	112	107	100	103	234	224	229	227	220	223
21	127	111	118	128	106	115	231	217	223	222	217	219
22	125	75	89	148	126	138	219	198	206	218	213	216
23	99	87	93	159	147	154	202	199	201	218	214	216
24	89	82	85	170	158	164	227	201	213	225	215	217
25	89	79	82	176	170	172	259	227	245	218	215	217
26	80	70	73	180	176	177	280	259	266	220	217	218
27	77	70	74	183	178	180	280	263	270	221	218	219
28	77	72	73	190	182	186	265	257	259	222	219	220
29	---	---	---	194	186	191	257	192	237	224	218	221
30	---	---	---	200	191	196	196	140	161	221	218	220
31	---	---	---	206	199	202	---	---	---	221	219	220
MONTH	201	70	130	---	---	159	280	140	224	299	143	229

SAN JACINTO RIVER BASIN

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	266	217	220	199	192	195	196	191	194	149	138	143
2	244	216	220	200	194	196	197	192	195	160	148	155
3	220	216	217	200	190	196	199	194	197	164	158	161
4	218	215	217	206	197	200	199	195	197	170	162	166
5	218	214	216	207	200	203	199	193	196	178	169	173
6	216	214	215	212	202	207	199	195	197	179	176	177
7	218	216	217	203	195	198	201	189	196	177	171	175
8	216	211	213	200	194	197	194	189	192	178	174	176
9	224	211	217	199	194	197	200	165	183	179	174	177
10	222	201	208	199	196	198	165	133	148	178	173	176
11	225	187	196	213	195	198	133	96	109	173	75	132
12	191	183	188	199	195	198	110	101	105	137	89	110
13	184	181	183	205	197	199	118	108	113	92	75	84
14	185	181	183	200	195	198	128	118	124	104	82	95
15	186	182	184	200	196	198	137	128	131	121	104	114
16	188	178	182	200	197	199	149	136	142	137	114	125
17	185	181	184	202	198	201	152	141	148	145	135	140
18	186	183	185	204	199	202	151	139	143	147	139	141
19	186	184	185	204	200	202	165	151	157	162	141	154
20	189	185	186	202	198	200	180	165	173	167	159	163
21	196	188	190	205	200	202	183	176	180	174	166	169
22	198	195	197	205	199	202	179	176	177	178	173	176
23	198	196	197	204	200	202	179	176	177	181	177	179
24	199	196	197	206	202	203	179	171	175	186	181	183
25	207	196	199	208	201	205	171	160	167	187	183	185
26	220	196	199	205	195	200	164	159	161	184	179	182
27	221	197	199	202	197	200	175	152	161	194	179	188
28	201	191	196	204	199	202	157	141	149	191	186	188
29	197	191	193	204	198	201	151	128	134	187	176	182
30	201	192	196	203	195	199	143	130	134	191	177	186
31	---	---	---	198	191	195	143	137	139	---	---	---
MONTH	266	178	199	213	190	200	201	96	161	194	75	159

e Estimated

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	26.0	22.9	24.4	19.9	18.0	18.8	16.4	15.1	15.8	10.3	8.6	9.3
2	26.0	23.2	24.5	18.6	16.5	17.6	15.1	14.4	14.6	11.7	9.8	10.8
3	25.3	22.0	23.7	17.7	15.8	16.7	15.1	14.5	14.8	13.5	11.4	12.5
4	24.8	21.9	23.5	17.2	14.9	16.2	14.6	13.2	13.9	14.6	13.3	14.0
5	24.3	22.7	23.6	17.4	16.6	16.9	13.2	12.0	12.6	16.2	14.6	15.4
6	24.8	22.3	23.6	17.5	15.9	16.8	12.1	10.7	11.3	17.0	15.9	16.5
7	24.1	23.3	23.6	16.1	14.6	15.4	10.9	10.4	10.6	16.7	14.6	15.8
8	24.1	23.0	23.5	15.3	13.8	14.5	11.6	10.5	11.0	14.6	13.7	14.1
9	24.3	23.7	23.9	15.3	13.8	14.5	12.6	11.6	12.1	13.8	12.6	13.0
10	24.5	23.8	24.2	14.8	14.2	14.6	12.5	11.9	12.1	12.6	12.2	12.4
11	24.2	23.8	23.9	14.7	13.8	14.2	11.9	11.0	11.5	13.0	12.4	12.6
12	25.1	23.7	24.3	14.1	13.9	13.9	11.0	9.9	10.5	15.8	13.0	14.2
13	24.4	22.3	23.7	14.4	13.8	14.0	10.0	9.0	9.6	16.2	15.8	16.0
14	22.3	20.3	21.5	14.0	13.5	13.7	9.6	8.4	9.0	15.9	15.7	15.8
15	20.4	19.1	19.8	13.5	12.0	12.9	9.6	8.1	8.8	15.8	13.9	15.0
16	19.7	18.2	18.9	12.0	10.5	11.5	10.0	8.2	9.0	13.9	12.8	13.1
17	19.3	17.4	18.3	10.5	9.8	10.1	10.4	8.9	9.6	13.0	12.4	12.7
18	19.4	17.2	18.2	10.1	9.9	10.0	10.7	8.9	9.8	13.6	12.4	12.9
19	20.0	17.2	18.5	10.8	10.1	10.4	11.6	9.6	10.6	13.8	12.8	13.1
20	20.3	17.6	18.9	12.1	10.6	11.4	15.0	11.1	12.1	13.5	12.6	13.0
21	20.6	18.3	19.5	13.3	12.0	12.6	15.4	14.6	15.1	14.5	13.3	13.9
22	19.9	18.8	19.2	13.9	12.2	13.0	14.6	13.6	13.9	15.0	14.5	14.7
23	19.5	18.3	18.9	14.0	12.1	13.0	14.0	13.5	13.8	14.6	13.9	14.3
24	22.0	19.4	20.6	13.8	11.6	12.7	13.5	12.7	12.9	13.9	12.4	13.0
25	21.3	20.2	20.8	14.7	12.6	13.6	12.9	12.1	12.4	12.5	11.5	11.8
26	20.9	18.3	19.5	15.4	13.7	14.5	12.3	11.1	11.8	12.5	12.0	12.3
27	18.5	16.6	17.7	16.8	14.8	15.8	11.1	9.8	10.2	12.8	12.2	12.5
28	16.6	15.4	15.7	18.3	16.4	17.1	9.8	9.1	9.6	13.1	12.0	12.5
29	16.5	15.2	15.8	18.0	17.2	17.6	9.4	8.7	9.0	13.7	12.3	12.9
30	17.5	15.8	16.6	17.9	16.3	17.1	9.5	8.3	8.9	14.6	13.2	13.8
31	19.4	17.1	18.1	---	---	---	9.8	8.7	9.1	15.2	14.1	14.7
MONTH	26.0	15.2	20.9	19.9	9.8	14.4	16.4	8.1	11.5	17.0	8.6	13.5

08070200 EAST FORK SAN JACINTO RIVER NEAR NEW CANEY, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.1	14.8	14.9	---	---	---	21.8	19.4	20.5	21.7	18.6	20.0
2	14.8	14.1	14.5	---	---	---	19.7	18.9	19.3	22.3	19.6	20.9
3	14.7	13.6	14.0	---	---	---	21.4	19.2	20.0	23.3	20.6	21.8
4	14.2	13.1	13.6	14.2	13.8	14.0	20.6	18.3	19.3	24.3	21.2	22.7
5	13.1	12.4	12.8	16.1	14.9	15.4	20.4	17.7	18.9	23.3	22.2	22.8
6	12.8	11.6	12.2	16.7	15.8	16.2	19.2	17.5	18.4	24.4	22.5	23.3
7	12.6	11.0	11.7	17.3	16.4	16.7	21.2	18.4	19.6	25.8	22.8	24.1
8	12.4	10.8	11.5	16.5	14.8	16.0	22.4	19.5	20.7	26.0	23.6	24.7
9	13.1	11.6	12.3	14.9	13.0	14.1	21.9	19.0	20.4	26.8	23.9	25.2
10	14.1	12.6	13.4	14.0	12.1	12.9	21.3	18.3	19.8	26.5	23.3	24.9
11	14.4	13.7	14.0	13.6	11.5	12.4	21.0	17.7	19.3	26.3	23.1	24.7
12	14.0	13.6	13.8	12.6	11.4	12.0	20.2	17.7	19.0	25.9	23.3	24.6
13	14.1	13.4	13.7	12.2	11.5	11.8	19.7	18.8	19.2	24.9	23.4	23.8
14	13.9	13.2	13.5	12.6	11.7	12.1	21.3	19.4	20.1	24.9	23.8	24.2
15	13.4	13.1	13.3	13.6	12.3	13.0	21.5	20.2	20.7	25.9	24.0	24.9
16	13.1	12.6	12.9	14.9	13.5	14.2	22.9	20.7	21.6	26.3	24.5	25.4
17	12.6	11.9	12.2	16.6	14.9	15.7	21.6	19.6	20.3	27.3	24.4	25.7
18	12.1	11.3	11.7	18.1	16.6	17.1	19.6	18.4	18.9	26.9	24.3	25.6
19	12.4	11.9	12.2	18.5	18.0	18.3	20.5	17.7	18.9	26.5	23.8	25.2
20	13.1	12.0	12.5	18.2	16.6	17.0	20.1	17.1	18.6	26.7	24.0	25.3
21	13.3	13.0	13.2	16.8	15.6	16.3	19.8	17.7	18.6	27.3	24.4	25.7
22	13.1	12.6	12.7	16.6	14.9	15.6	20.2	17.0	18.5	27.7	24.8	26.1
23	12.9	12.2	12.5	16.8	14.6	15.5	20.4	16.8	18.5	26.8	25.0	25.9
24	14.3	12.9	13.4	17.5	15.1	16.2	20.5	17.2	18.9	27.1	25.1	26.0
25	16.0	14.3	15.0	18.5	16.3	17.2	21.0	18.4	19.6	27.3	25.1	26.1
26	16.7	15.9	16.4	19.5	17.6	18.5	20.2	19.4	19.8	27.6	25.2	26.3
27	16.8	15.5	16.0	20.0	18.8	19.3	20.8	19.7	20.2	27.7	25.5	26.5
28	15.9	14.7	15.1	21.4	19.4	20.2	22.2	19.2	20.6	28.7	25.2	26.9
29	---	---	---	22.4	20.2	21.1	21.3	19.4	20.2	29.2	25.7	27.4
30	---	---	---	22.2	21.1	21.6	20.6	18.3	19.4	29.7	26.1	27.9
31	---	---	---	22.8	20.7	21.7	---	---	---	30.2	26.6	28.4
MONTH	16.8	10.8	13.4	---	---	---	22.9	16.8	19.6	30.2	18.6	24.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	30.3	26.8	28.5	30.9	27.8	29.4	31.0	28.4	29.8	29.4	26.1	27.6
2	30.6	27.0	28.7	31.1	28.2	29.6	31.1	28.4	29.9	29.5	26.5	28.0
3	30.1	27.7	28.9	29.9	28.0	28.6	31.3	29.5	30.3	29.5	26.7	28.1
4	29.6	27.7	28.6	30.2	27.4	28.6	30.5	28.3	29.4	29.4	27.0	28.3
5	29.5	27.8	28.6	31.1	27.8	29.4	30.6	28.5	29.6	29.2	26.6	28.1
6	28.3	26.0	26.8	31.4	28.2	29.8	29.7	28.0	28.9	28.5	26.9	27.5
7	28.4	25.0	26.4	31.7	28.5	30.1	28.9	27.3	28.0	28.4	25.9	27.2
8	27.6	25.9	26.6	31.3	28.6	30.0	29.1	26.7	27.7	28.3	26.5	27.5
9	29.0	26.1	27.3	31.3	28.7	30.0	29.4	26.9	28.0	28.6	26.3	27.5
10	29.9	26.8	28.2	31.3	28.8	30.1	29.9	26.9	28.3	27.8	25.3	26.1
11	29.5	27.2	28.3	31.5	28.9	30.3	30.2	27.6	28.8	25.6	24.6	25.1
12	29.4	27.4	28.4	31.6	29.1	30.4	30.5	27.4	28.8	25.4	24.8	25.1
13	30.1	27.5	28.6	30.7	29.2	30.1	29.6	27.6	28.6	25.1	24.7	24.8
14	31.1	27.6	29.2	30.2	28.3	29.1	28.3	27.1	27.5	25.3	24.8	25.1
15	30.5	28.3	29.5	29.9	26.9	28.3	29.3	26.3	27.6	25.4	25.1	25.2
16	31.0	27.7	29.3	31.1	28.2	29.6	28.6	26.9	27.8	25.6	25.2	25.4
17	31.0	28.0	29.5	31.3	28.6	29.9	28.0	26.7	27.4	26.5	25.0	25.6
18	31.3	28.4	29.8	31.0	28.0	29.5	28.3	26.2	27.2	27.2	25.2	26.0
19	31.8	28.8	30.2	30.2	28.1	29.3	29.5	26.5	27.8	27.2	25.7	26.4
20	31.2	28.8	30.0	30.3	27.8	29.1	29.4	26.7	28.1	27.7	25.8	26.6
21	31.4	28.3	29.8	29.7	27.7	28.8	28.4	26.7	27.5	28.1	26.0	27.0
22	30.9	28.2	29.6	29.7	27.8	28.8	27.0	26.2	26.5	28.6	26.2	27.4
23	30.6	28.1	29.4	30.1	27.8	29.0	28.8	26.0	27.2	29.0	26.6	27.8
24	30.6	27.8	29.2	30.8	28.0	29.4	28.9	26.3	27.6	28.5	26.5	27.6
25	30.2	28.0	29.2	30.7	28.4	29.6	29.4	26.8	27.9	28.3	26.3	27.4
26	29.4	27.8	28.7	30.8	28.4	29.6	29.5	26.5	28.0	27.4	26.4	26.8
27	29.4	27.8	28.6	31.1	28.7	29.9	29.8	27.1	28.4	28.3	26.0	27.0
28	29.1	27.4	27.9	30.9	28.8	29.9	30.3	27.4	28.8	28.5	26.2	27.3
29	29.5	26.5	27.8	30.4	28.4	29.5	30.5	27.6	29.0	28.3	26.1	27.2
30	30.4	27.7	29.0	31.0	28.3	29.7	29.4	27.5	28.5	28.3	25.9	27.1
31	---	---	---	30.9	28.4	29.8	28.4	26.9	27.6	---	---	---
MONTH	31.8	25.0	28.7	31.7	26.9	29.5	31.3	26.0	28.3	29.5	24.6	26.8

SAN JACINTO RIVER BASIN

08070500 CANEY CREEK NEAR SPLENDORA, TX

LOCATION.--Lat 30°15'34", long 95°18'08", Montgomery County, Hydrologic Unit 12040103, on left bank at downstream side of bridge on Farm Road 2090, 4 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, and 8 mi west of Splendora.

DRAINAGE AREA.--105 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jan 1944 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 118.44 ft above sea level. Prior to Jun 17, 1965, at site 170 ft upstream at datum 5.00 ft higher. Satellite telemeter at station.

REMARKS.--Records poor. No known regulation or diversions. Minimum discharge for period of record was caused by construction upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, 27.0 ft in Nov 1940, present site and datum, from information by local resident. Flood in May 1935 reached a stage of 24.3 ft, present site and datum, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 7	1600	6,550	20.43	Feb 27	1215	3,760	17.42
Feb 23	1045	1,830	13.10				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	108	56	31	166	52	37	20	17	15	24
2	21	32	74	53	41	124	47	34	20	17	14	19
3	20	25	357	52	83	103	46	29	19	17	13	17
4	20	24	850	52	54	92	45	31	18	17	15	17
5	20	29	156	81	38	86	42	31	18	17	14	16
6	21	41	92	1040	40	81	41	31	33	17	18	16
7	22	32	76	e5500	32	82	41	31	33	17	90	17
8	25	28	234	3200	28	85	40	30	27	16	119	17
9	88	26	197	306	26	75	39	29	24	16	55	17
10	58	33	97	155	90	67	36	27	21	16	34	17
11	40	88	71	113	e720	62	35	23	20	15	26	172
12	50	59	59	e680	230	60	34	24	20	15	23	e1200
13	72	102	53	445	71	59	34	23	19	15	20	650
14	130	66	51	164	49	68	34	24	19	15	23	125
15	48	45	48	189	41	107	35	24	19	15	37	83
16	32	42	46	117	75	370	34	25	20	16	30	72
17	27	39	45	81	560	e1180	34	24	20	16	27	83
18	25	36	44	61	350	319	37	23	19	15	30	60
19	24	39	42	53	128	132	56	23	18	15	24	45
20	23	37	58	46	99	96	44	24	18	15	21	39
21	22	35	780	47	80	78	36	23	17	15	20	36
22	22	33	630	239	e830	70	35	23	17	14	22	33
23	22	32	285	282	e1470	64	34	23	17	14	23	31
24	129	30	e750	81	235	60	33	22	16	14	37	29
25	47	30	285	53	143	58	32	22	17	14	30	e28
26	34	30	133	49	e1000	57	31	22	17	14	21	e28
27	32	29	120	49	e3000	55	34	22	17	15	19	27
28	28	330	94	38	406	54	110	22	17	15	18	27
29	26	e1600	77	33	---	53	69	21	17	15	19	26
30	26	550	66	31	---	50	44	21	17	15	19	26
31	26	---	60	30	---	51	---	21	---	15	22	---
TOTAL	1202	3547	6038	13376	9950	4064	1264	789	594	479	898	2997
MEAN	38.8	118	195	431	355	131	42.1	25.5	19.8	15.5	29.0	99.9
MAX	130	1600	850	5500	3000	1180	110	37	33	17	119	1200
MIN	20	24	42	30	26	50	31	21	16	14	13	16
AC-FT	2380	7040	11980	26530	19740	8060	2510	1560	1180	950	1780	5940
CFSM	.37	1.13	1.85	4.11	3.38	1.25	.40	.24	.19	.15	.28	.95
IN.	.43	1.26	2.14	4.74	3.53	1.44	.45	.28	.21	.17	.32	1.06

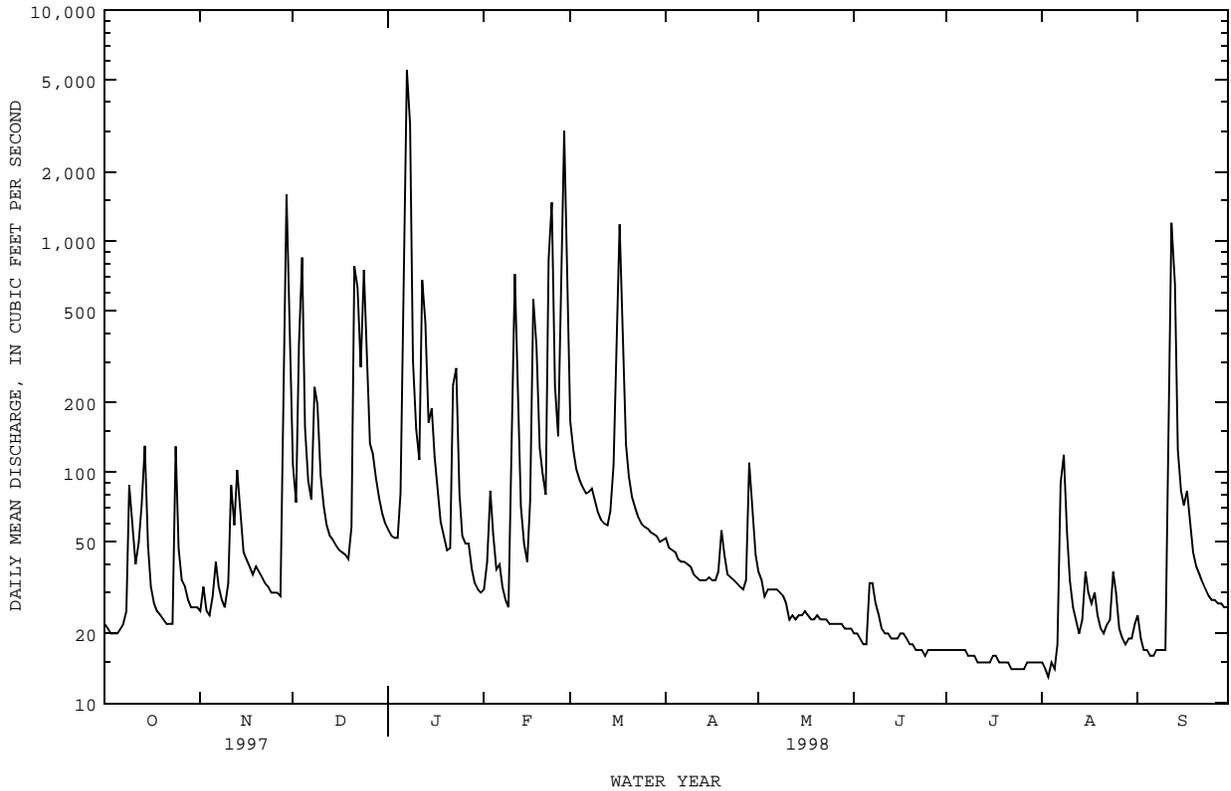
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEAR (WY)

MEAN	62.9	73.8	85.4	124	124	88.7	109	101	93.6	38.3	27.9	39.0
MAX	895	817	277	497	368	245	606	542	843	190	262	296
(WY)	1995	1947	1977	1995	1961	1973	1945	1983	1973	1979	1983	1961
MIN	6.57	8.20	10.5	10.7	13.6	12.2	13.6	13.8	10.1	7.28	6.69	5.91
(WY)	1957	1957	1957	1957	1971	1971	1971	1956	1954	1971	1956	1956

08070500 CANEY CREEK NEAR SPLENDORA, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1944 - 1998	
ANNUAL TOTAL	36703		45198		80.2	
ANNUAL MEAN	101		124		15.9	
HIGHEST ANNUAL MEAN					192	1995
LOWEST ANNUAL MEAN					15.9	1971
HIGHEST DAILY MEAN	1600	Nov 29	5500	Jan 7	11100	Jun 14 1973
LOWEST DAILY MEAN	16	Aug 18	13	Aug 3	5.4	Sep 21 1956
ANNUAL SEVEN-DAY MINIMUM	16	Sep 13	14	Jul 20	5.5	Sep 21 1956
INSTANTANEOUS PEAK FLOW			6550	Jan 7	36000	Oct 17 1994
INSTANTANEOUS PEAK STAGE			a20.43	Jan 7	26.40	Oct 17 1994
ANNUAL RUNOFF (AC-FT)	72800		89650		58110	
ANNUAL RUNOFF (CFSM)	.96		1.18		.76	
ANNUAL RUNOFF (INCHES)	13.00		16.01		10.38	
10 PERCENT EXCEEDS	189		179		114	
50 PERCENT EXCEEDS	44		34		27	
90 PERCENT EXCEEDS	19		17		12	

e Estimated
a From floodmark.



SAN JACINTO RIVER BASIN

08070500 CANEY CREEK NEAR SPLENDORA, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Chemical analyses: Oct 1962 to Apr 1964. Chemical and biochemical analyses: Aug 1983 to current year.
Pesticide analyses: Aug 1983 to Sep 1990. Sediment analyses: Feb 1966, Apr 1973 to Mar 1975.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
FEB 10...	0925	26	135	7.1	15.0	9.2	91	110	210	39
JUN 23...	1154	17	90	6.9	27.0	6.9	86	160	180	22
AUG 24...	1245	47	85	7.4	24.5	7.4	89	580	520	19

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 10...	3	13	1.8	10	.7	1.0	36	4.4	17
JUN 23...	5	6.3	1.5	8.4	.8	1.0	17	2.2	14
AUG 24...	3	5.3	1.5	7.4	.7	.95	16	2.6	12

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 10...	<.10	14	84	<.010	.279	<.020	.57	--	--
JUN 23...	<.10	14	59	<.010	.370	.037	.54	.13	.08
AUG 24...	<.10	15	56	<.010	.373	.020	.70	.31	.14

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB 10...	.18	.30	.034	.023	.023	.07	5.4	180	45
JUN 23...	.12	.17	.030	.031	<.010	--	2.5	22	49
AUG 24...	.16	.33	.053	.028	.028	.09	4.3	40	34

08071280 LUCE BAYOU ABOVE LAKE HOUSTON NEAR HUFFMAN, TX

LOCATION.--Lat 30°06'34", long 95°03'35", Liberty County, Hydrologic Unit 12040103, on left bank, in Tricontinental Pipeline Co. right-of-way, 1.1 mi upstream from Key Gully, 3.1 mi east of Huffman-Cleveland Road, and 6.3 mi northeast of Huffman.

DRAINAGE AREA.--218 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, at site 2.2 mi downstream, water years, 1970, 1972, 1975; Feb to Apr 1984 (discharge measurements only). May 1984 to current year (daily mean discharges).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 39.91 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation. There are diversions above station for irrigation, but amounts are unknown.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 23	0230	6,290	26.20	Feb 28	2245	1,790	21.79
Jan 9	2215	3,850	24.25	Sep 14	2045	1,790	21.80

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	12	237	126	109	1580	9.5	1.1	.15	.02	.00	1.1
2	1.2	7.1	183	113	104	1160	7.8	.52	.05	.01	.00	1.1
3	.79	3.8	247	103	107	772	7.5	.32	.04	.03	.00	.97
4	.58	2.5	330	95	129	295	6.3	.52	.03	.12	.00	15
5	.55	2.6	327	96	141	103	5.4	.58	.03	.04	.00	8.2
6	.60	96	252	384	127	82	5.0	.57	.03	.02	.00	10
7	1.8	93	165	2160	117	73	4.7	.55	.03	.01	.00	9.6
8	3.4	70	321	2970	106	66	4.3	.38	.04	.00	.00	4.1
9	30	34	343	3730	96	60	3.8	.52	.41	.00	.00	3.7
10	27	18	290	3370	108	54	3.3	.64	1.1	.00	4.1	3.4
11	34	21	201	2030	323	47	3.0	.52	.80	.00	5.7	156
12	72	52	143	1200	464	39	2.7	.42	.47	.00	2.6	445
13	99	93	118	776	487	31	2.6	.22	.16	.00	1.4	801
14	123	93	101	734	318	27	2.5	.71	.06	.00	2.0	1440
15	129	84	89	764	188	39	2.5	3.9	.04	.00	2.4	1380
16	91	73	77	458	164	102	2.6	.46	.03	.00	1.6	596
17	56	59	65	286	331	285	2.6	.26	.03	.00	.97	262
18	22	44	50	206	412	363	2.8	.19	.02	.00	1.2	192
19	10	45	40	163	453	376	3.4	.17	.01	.00	2.2	114
20	6.3	39	54	132	400	282	3.0	.21	.01	.00	7.5	61
21	3.8	41	1180	117	268	140	2.8	.23	.01	.00	4.8	13
22	2.7	40	4190	117	745	81	3.5	.22	.00	.00	3.3	27
23	19	25	5720	210	910	64	3.1	.16	.00	.00	2.2	18
24	81	18	4120	297	1000	53	2.7	.05	.00	.00	6.3	11
25	62	14	2790	312	1040	45	2.2	.04	.00	.00	10	7.8
26	23	10	1860	296	1070	37	1.8	.04	.00	.00	6.9	6.2
27	9.9	8.4	1270	243	1250	28	1.3	.04	.00	.00	9.5	5.2
28	6.2	56	930	199	1550	20	1.2	.04	.00	.00	4.5	3.9
29	6.6	314	605	157	---	16	1.4	1.5	.00	.00	2.5	3.4
30	5.7	277	277	129	---	12	.89	2.0	.01	.00	1.4	2.8
31	7.2	---	155	117	---	11	---	.55	---	.00	.95	---
TOTAL	937.02	1745.4	26730	22090	12517	6343	106.19	17.63	3.56	0.25	84.02	5602.47
MEAN	30.2	58.2	862	713	447	205	3.54	.57	.12	.008	2.71	187
MAX	129	314	5720	3730	1550	1580	9.5	3.9	1.1	.12	10	1440
MIN	.55	2.5	40	95	96	11	.89	.04	.00	.00	.00	.97
AC-FT	1860	3460	53020	43820	24830	12580	211	35	7.1	.5	167	11110
CFSM	.14	.27	3.96	3.27	2.05	.94	.02	.00	.00	.00	.01	.86
IN.	.16	.30	4.56	3.77	2.14	1.08	.02	.00	.00	.00	.01	.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	242	85.9	257	282	328	360	224	245	391	57.4	11.2	46.4			
MAX (WY)	2988	490	862	826	980	878	1047	2443	1965	334	103	394			
MIN (WY)	1995	1987	1998	1992	1992	1993	1991	1989	1993	1987	1995	1996			
10 PERCENT EXCEEDS	.009	.17	1.43	6.22	5.83	3.06	3.06	.57	.12	.008	1.09	.034			
50 PERCENT EXCEEDS	1993	1989	1989	1989	1996	1996	1987	1998	1998	1998	1992	1992			

SUMMARY STATISTICS

	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1984 - 1998
ANNUAL TOTAL	94386.33	76176.54	
ANNUAL MEAN	259	209	214
HIGHEST ANNUAL MEAN			453
LOWEST ANNUAL MEAN			52.5
HIGHEST DAILY MEAN	5720	Dec 23	23000
LOWEST DAILY MEAN	.05	Aug 22	.00
ANNUAL SEVEN-DAY MINIMUM	.11	Aug 17	.00
INSTANTANEOUS PEAK FLOW		6290	25900
INSTANTANEOUS PEAK STAGE		26.20	35.08
ANNUAL RUNOFF (AC-FT)	187200	151100	155100
ANNUAL RUNOFF (CFSM)	1.19	.96	.98
ANNUAL RUNOFF (INCHES)	16.11	13.00	13.34
10 PERCENT EXCEEDS	823	448	434
50 PERCENT EXCEEDS	40	8.4	9.2
90 PERCENT EXCEEDS	.98	.00	.23

SAN JACINTO RIVER BASIN

08071280 LUCE BAYOU ABOVE LAKE HOUSTON NEAR HUFFMAN, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical: Feb 1984 to current year. Pesticide analyses: Feb 1984 to Sep 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
------	------	---	---	--	------------------------------------	-----------------------------------	------------------------------------	--	--	---

FEB 11...	0832	313	125	7.1	13.0	8.1	77	3100	3800	35
JUN 23...	1012	.00	485	6.9	28.0	1.9	24	150	32	100
AUG 25...	1320	9.0	245	7.2	27.0	4.6	58	880	980	51

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS-FIX END CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
------	--	---	---	---	-----------------------------------	--	--	--	--	---

FEB 11...	10	11	1.9	11	.8	1.2	25	4.2	19	<.10
JUN 23...	--	33	4.4	58	3	4.4	110	4.0	76	.28
AUG 25...	--	17	2.1	29	2	2.6	59	10	26	.23

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
------	---	--	---	---	---	---	--------------------------------------	--	---

FEB 11...	6.3	71	.222	.012	.234	<.020	1.5	--	--
JUN 23...	3.0	250	--	<.010	<.050	.036	--	.68	.52
AUG 25...	5.8	138	1.88	.027	1.90	.034	2.8	.90	.61

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
------	--	---	---------------------------------------	--	---	---	---	---------------------------------------	---

FEB 11...	.70	1.3	.103	.012	.017	.05	21	420	55
JUN 23...	.56	.71	.040	.019	.019	.06	12	45	1030
AUG 25...	.64	.94	.063	.024	.023	.07	12	24	30

08072000 LAKE HOUSTON NEAR SHELDON, TX

LOCATION.--Lat 29°54'58", long 95°08'28", Harris County, Hydrologic Unit 12040101, at intake structure on San Jacinto River near right bank 100 ft upstream from Lake Houston Dam, 4.0 mi north of Sheldon, 4.6 mi upstream from bridge on U.S. Highway 90, and 18 mi northeast of Houston.

DRAINAGE AREA.--2,828 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Apr 1954 to current year.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage at dam is 0.70 ft below sea level; unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by two earthfill embankment sections and a 3,160-foot long concrete spillway midway between the embankment sections. The dam was completed and storage began Apr 9, 1954. The spillway includes two tainter gates, 18.0 x 20.5 ft, that can be used for control of releases below gage heights of 44.5 ft and above 28.0 ft. In addition, there is a 36-inch-diameter sluice gate that is used for low-flow releases. Water is used for irrigation, municipal, and industrial supply in the Houston metropolitan area. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Gage height (feet)
Top of dam.....	63.0
Design flood.....	57.0
Crest of spillway.....	44.5
Crest of tainter gates (sill).....	28.0
Lowest gated outlet (invert).....	22.0

COOPERATION.--The capacity table is based on a bathymetric survey made in 1994 by Texas Water Development Board. Records of diversions were furnished by the San Jacinto River Authority and the City of Houston.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 249,900 acre-ft, Oct 19, 1994 (gage height, 52.79 ft); minimum since first filling of lake in Aug 1954, 53,380 acre-ft, Dec 1, 1971 (gage height, 34.08 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 171,800 acre-ft, Jan 9 (gage height, 47.49 ft); minimum contents, 111,600 acre-ft, Aug 6 (gage height, 42.29 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138800	141000	151300	135600	124200	152500	123800	138400	133700	127400	114200	120400
2	138700	140000	147600	134900	126800	147700	124600	138500	132400	127400	113900	120300
3	138700	139500	144100	134700	129500	141500	125300	138800	131800	127100	113500	120400
4	138700	139100	148600	134400	132500	134300	125800	138900	131600	126900	113000	120700
5	138900	140000	145600	132100	133400	127900	126200	139100	131500	126800	111900	119900
6	139500	140400	136400	141100	132100	130900	126500	138700	132900	126500	113500	119800
7	141000	140000	129100	167600	130200	133900	127000	138700	132800	126100	112200	119800
8	142900	140100	130100	171700	128300	135500	127800	138100	132300	125800	114500	120100
9	144900	140100	130400	166600	127500	137600	127900	138400	132400	125400	114800	120100
10	145100	140900	139600	157300	130700	138800	128100	138000	132400	125000	115400	121900
11	145300	140500	142700	150200	139200	140400	128200	137300	132000	124500	116100	139600
12	146200	142200	142700	146500	145600	140700	128100	137100	131900	123800	115300	145100
13	149200	143200	141500	145500	146900	141500	128700	137100	131700	123600	114500	141500
14	150200	143700	139900	143900	146100	142600	128600	136800	131300	124300	113300	141000
15	148600	143500	138700	138400	144400	143100	128900	136900	130800	124600	114600	134900
16	146800	142500	137500	131100	141000	146500	130000	136800	130700	124200	115000	127300
17	145000	141700	136300	131200	138400	147200	129900	136800	130500	124000	114900	131200
18	144000	142000	134900	136000	135300	146000	130300	136400	130300	122500	116500	135700
19	143100	141700	133700	139300	131100	144900	130900	136400	130100	122100	117000	137500
20	142300	141600	135100	137900	126800	140700	131300	135900	129800	121200	117700	138000
21	142000	141600	156700	126300	128700	131700	132000	135600	129400	122300	118100	136900
22	141600	141600	151600	122800	147400	124600	132000	135500	129100	122200	117400	136400
23	142200	141000	147500	127300	148400	124700	132000	135300	128600	121400	118600	136100
24	143400	140800	148600	135900	146700	126700	131900	135200	128600	121200	116900	135300
25	143900	140500	145700	146300	146200	127500	132100	134900	128200	120800	116800	134400
26	142700	140500	143500	141300	152300	128200	132000	134700	128200	120100	120900	134700
27	141400	140300	141100	130800	153400	129700	132800	134700	127900	118400	120500	136800
28	141100	143500	134300	129200	151700	130500	133800	134500	127700	119500	121000	136500
29	140900	152200	129400	133200	---	131200	136500	134400	128000	114300	120600	136500
30	141000	153800	133800	132800	---	128600	137300	134300	127200	113700	120300	136500
31	141000	---	135700	122300	---	123300	---	133900	---	112900	120600	---
MAX	150200	153800	156700	171700	153400	152500	137300	139100	133700	127400	121000	145100
MIN	138700	139100	129100	122300	124200	123300	123800	133900	127200	112900	111900	119800
(+)	45.03	46.09	44.63	43.37	45.92	43.47	44.75	44.49	43.85	42.43	43.21	44.69
(@)	+2500	+12800	-18100	-13400	+29400	-28400	+14000	-3400	-6700	-14300	+7700	+15900

CAL YR 1997 MAX 159300 MIN 128300 (@) -8800
WTR YR 1998 MAX 171700 MIN 111900 (@) -2000

(+) Gage height, in feet, at end of month.
(@) Change in contents, in acre-feet.

SAN JACINTO RIVER BASIN

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Jul 1961 to Apr 1964, Dec 1969 to current year. Biochemical analyses: Aug 1983 to current year. Pesticide analyses: May 1968 to Aug 1972, Aug 1983 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

295516095080801 - LAKE HOUSTON SITE AC

DATE	TIME	RESER- VOIR STORAGE (AC-FT) (00054)	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
FEB												
18...	0930	136000	1.00	185	7.5	14.5	.30	9.5	93	750	410	48
18...	0932	--	10.0	185	7.2	14.0	--	9.4	91	--	--	--
18...	0934	--	20.0	190	7.2	14.0	--	9.4	91	--	--	--
18...	0936	--	35.0	190	7.2	14.0	--	9.5	92	--	--	48
APR												
28...	1022	134000	1.00	165	7.4	21.0	.40	7.5	84	K2	K1	43
28...	1024	--	10.0	165	7.4	21.0	--	7.5	84	--	--	--
28...	1026	--	20.0	165	7.4	21.0	--	7.5	84	--	--	--
28...	1028	--	30.0	165	7.4	21.0	--	7.5	84	--	--	--
28...	1030	--	43.0	165	7.2	21.0	--	7.5	84	--	--	43
JUN												
24...	0920	129000	1.00	225	7.8	30.5	.70	6.7	89	K1	K1	57
24...	0922	--	10.0	225	7.4	30.0	--	6.1	80	--	--	--
24...	0924	--	20.0	225	7.2	29.5	--	5.5	72	--	--	--
24...	0926	--	30.0	225	7.1	29.5	--	4.7	61	--	--	--
24...	0928	--	40.0	230	6.9	29.0	--	3.2	42	--	--	57
AUG												
25...	0920	117000	1.00	290	7.5	29.0	.80	5.8	76	24	K14	59
25...	0922	--	10.0	290	7.4	29.0	--	5.4	71	--	--	--
25...	0924	--	20.0	290	7.4	29.0	--	5.4	71	--	--	--
25...	0926	--	30.0	290	7.4	29.0	--	5.4	71	--	--	--
25...	0928	--	39.0	290	7.3	29.0	--	5.2	68	--	--	59

295516095080801 - LAKE HOUSTON SITE AC

DATE	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS STO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB												
18...	7	16	2.0	16	1	2.3	41	7.3	23	<.10	9.5	103
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	6	16	2.0	16	1	2.3	42	7.4	24	<.10	9.4	104
APR												
28...	5	14	1.9	13	.8	2.2	38	6.3	18	.13	7.1	86
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	5	14	1.9	13	.8	2.2	38	6.3	18	.13	7.1	87
JUN												
24...	3	19	2.5	22	1	2.7	54	8.1	29	.10	1.6	117
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	19	2.6	22	1	2.7	59	7.7	28	<.10	2.5	120
AUG												
25...	--	19	2.7	31	2	3.5	66	9.3	40	.16	7.4	153
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	19	2.7	31	2	3.5	63	9.4	40	.17	7.5	152

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

295516095080801 - LAKE HOUSTON SITE AC

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
FEB												
18...	.356	.011	.367	.024	1.1	.69	.45	.48	.71	.115	.044	.053
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.352	.010	.362	.029	1.1	.68	.45	.48	.71	.115	.042	.052
APR												
28...	.232	.013	.245	.066	.87	.55	.38	.45	.62	.086	.039	.031
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	.158	.012	.170	.059	.88	.65	.37	.43	.71	.089	.036	.029
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	.180	.013	.193	.064	.82	.57	.40	.46	.63	.085	.030	.032
JUN												
24...	--	<.010	<.050	<.020	--	--	--	.34	.51	.097	.028	.022
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	.011	<.050	.071	--	.51	.39	.46	.58	.075	.043	.033
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	.015	<.050	.129	--	.61	.37	.50	.74	.092	.043	.037
AUG												
25...	--	.030	<.050	.045	--	.44	.32	.36	.49	.085	.049	.054
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	.030	<.050	.056	--	.42	.34	.39	.48	.087	.048	.057
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	.033	<.050	.077	--	.44	.35	.43	.52	.106	.047	.053

295516095080801 - LAKE HOUSTON SITE AC

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PCB, TOTAL (UG/L) (39516)	PCNS UNFILT RECOVER (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L) (39350)	P,P'- DDD UNFILT RECOVER (UG/L) (39360)
FEB												
18...	.16	12	8.4	4.20	E.130	89	<4.0	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.16	12	8.4	--	--	110	9.2	--	--	--	--	--
APR												
28...	.10	12	9.4	.990	<.100	73	4.5	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	.09	--	--	--	--	86	6.7	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	.10	11	9.2	--	--	130	10	--	--	--	--	--
JUN												
24...	.07	9.4	7.4	9.50	.380	12	13	<.100	<.100	<.010	<.100	<.010
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	.10	--	--	--	--	12	71	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	.11	8.8	7.7	--	--	25	353	--	--	--	--	--
AUG												
25...	.17	7.4	6.7	2.10	<.100	<10	8.2	<.100	<.100	<.010	<.100	<.010
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.17	--	--	--	--	<10	29	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.16	8.0	6.4	--	--	<10	69	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

295702095091401 - LAKE HOUSTON SITE BC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB								
18...	0955	1.00	180	7.2	14.0	.25	9.2	90
18...	0957	10.0	175	7.1	14.0	--	9.2	90
18...	0959	20.0	175	7.1	14.0	--	9.2	90
18...	1001	30.0	175	7.1	14.0	--	9.2	90
18...	1003	40.0	175	7.1	14.0	--	9.2	90
APR								
28...	1055	1.00	180	7.5	21.5	.32	7.5	85
28...	1057	10.0	175	7.5	21.0	--	7.5	84
28...	1059	20.0	175	7.5	21.0	--	7.5	84
28...	1101	30.0	175	7.5	21.0	--	7.5	84
28...	1103	40.0	175	7.4	21.0	--	7.6	85
JUN								
24...	0950	1.00	250	7.5	31.0	.50	6.2	83
24...	0952	10.0	245	7.3	30.5	--	5.9	79
24...	0954	20.0	240	7.5	30.5	--	5.9	79
24...	0956	30.0	240	7.5	30.5	--	5.9	79
24...	0958	38.0	240	7.5	30.0	--	5.9	78
AUG								
25...	0950	1.00	290	8.4	29.5	.80	7.3	96
25...	0952	10.0	300	7.6	29.0	--	6.0	78
25...	0954	20.0	315	7.3	29.0	--	4.9	64
25...	0956	30.0	320	7.2	29.0	--	4.4	57
25...	0958	37.0	320	7.2	29.0	--	4.4	57

295902095074201 - LAKE HOUSTON SITE CC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)
FEB										
18...	1015	1.00	155	7.2	13.5	.20	9.4	90	52	46
18...	1017	10.0	155	7.1	13.5	--	9.4	90	--	--
18...	1019	20.0	160	7.1	13.5	--	9.4	90	--	--
18...	1021	30.0	160	7.1	13.5	--	9.4	90	--	--
APR										
28...	1110	1.00	200	7.6	21.5	.30	7.3	83	K14	K10
28...	1112	10.0	205	7.6	21.5	--	7.3	83	--	--
28...	1114	20.0	205	7.6	21.5	--	7.3	83	--	--
28...	1116	27.0	205	7.5	21.0	--	7.2	81	--	--
JUN										
24...	1010	1.00	255	7.6	31.0	.40	6.2	83	K4	K2
24...	1012	10.0	255	7.5	30.5	--	5.8	77	--	--
24...	1014	20.0	255	7.4	30.5	--	5.6	75	--	--
24...	1016	28.0	260	7.3	30.5	--	5.2	69	--	--
AUG										
25...	1015	1.00	320	8.0	29.5	.44	6.7	88	K8	K2
25...	1017	10.0	325	7.5	29.0	--	5.6	73	--	--
25...	1019	20.0	325	7.5	29.0	--	5.6	73	--	--
25...	1021	25.5	350	7.3	28.5	--	4.4	57	--	--

SAN JACINTO RIVER BASIN

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

295902095074201 - LAKE HOUSTON SITE CC

DATE	HARD- NESS TOTAL (MG/L CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
FEB										
18...	43	7	14	1.8	12	.8	2.2	36	6.0	19
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	43	7	14	1.8	12	.8	2.0	36	6.2	18
APR										
28...	48	--	16	2.2	17	1	2.3	49	7.3	23
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
28...	49	1	16	2.2	18	1	2.3	48	7.5	25
JUN										
24...	59	2	19	2.6	28	2	3.0	57	9.2	36
24...	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
24...	59	--	19	2.6	27	2	3.0	62	9.4	36
AUG										
25...	59	--	19	2.7	36	2	3.8	59	11	46
25...	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
25...	59	--	19	2.7	43	2	4.3	72	12	51

295902095074201 - LAKE HOUSTON SITE CC

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
FEB									
18...	<.10	8.3	86	--	<.010	.225	.020	.50	.52
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	<.10	8.1	85	--	<.010	.205	.021	.50	.52
APR									
28...	.13	5.9	104	.078	.012	.090	.084	.34	.43
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	.13	5.9	106	.053	.013	.066	.097	.38	.47
JUN									
24...	.11	3.3	135	--	<.010	<.050	<.020	--	.29
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	.13	3.8	138	--	<.010	<.050	.074	.32	.40
AUG									
25...	.18	8.7	163	.060	.030	.090	.073	.31	.38
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	.20	11	188	.276	.080	.356	.134	.37	.50

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

295902095074201 - LAKE HOUSTON SITE CC

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-ORTHODIS-SOLVED (MG/L AS P) (00671)	PHOS-ORTHO, DIS-SOLVED (MG/L AS P04) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70954)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
FEB									
18...	.027	.034	.10	14	9.5	5.80	.180	130	7.0
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	.034	.036	.11	15	10	--	--	110	6.4
APR									
28...	.023	.029	.09	10	8.5	2.60	<.100	15	7.8
28...	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--
28...	.024	.031	.10	10	8.5	--	--	28	10
JUN									
24...	.043	.047	.14	8.8	6.9	9.50	.380	10	8.7
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
24...	.043	.037	.11	8.6	6.9	--	--	<10	62
AUG									
25...	.147	.097	.30	7.3	6.3	2.30	.160	<10	<4.0
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	.178	.165	.51	7.1	6.0	--	--	<10	6.5

300016095073401 - LAKE HOUSTON SITE DC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)
FEB								
18...	1040	1.00	180	7.3	14.0	.20	9.4	91
18...	1042	10.0	190	7.3	13.5	--	9.4	90
18...	1044	22.0	190	7.2	13.5	--	9.5	91
APR								
28...	1140	1.00	205	7.6	21.5	.30	7.4	84
28...	1142	10.0	205	7.6	21.0	--	7.2	81
28...	1144	20.0	205	7.5	21.0	--	7.2	81
28...	1146	27.0	200	7.5	21.0	--	7.2	81
JUN								
24...	1040	1.00	260	7.6	31.0	.40	6.2	83
24...	1042	10.0	250	7.5	30.5	--	6.0	80
24...	1044	18.0	250	7.5	30.5	--	6.0	80
AUG								
25...	1040	1.00	340	8.1	29.5	.40	7.0	92
25...	1042	10.0	360	7.4	28.5	--	4.6	59
25...	1044	19.5	350	7.3	28.5	--	4.4	57

300158095074601 - LAKE HOUSTON SITE EC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, FECAL, KF AGAR PER (COLS. ML) (31673)	HARD-NESS TOTAL AS CACO3 (MG/L) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB												
18...	1140	1.00	100	6.7	14.0	.10	9.3	90	920	1200	28	7
18...	1142	10.0	100	6.7	12.0	--	9.7	90	--	--	--	--
18...	1144	19.0	100	6.7	12.0	--	9.7	90	--	--	28	7
APR												
28...	1300	1.00	225	7.9	22.5	.20	7.5	86	110	K12	50	1
28...	1302	10.0	200	7.6	21.5	--	7.2	81	--	--	--	--
28...	1304	14.5	200	7.7	21.5	--	7.2	81	--	--	47	7
JUN												
24...	1145	1.00	260	7.6	31.5	.20	6.0	81	K2	K1	53	--
24...	1147	10.0	280	7.5	31.0	--	5.5	74	--	--	--	--
24...	1149	16.5	280	7.5	30.5	--	5.5	73	--	--	59	--
AUG												
25...	1152	1.00	280	8.4	31.1	.38	7.2	97	K4	K2	50	--
25...	1154	10.0	275	7.1	28.5	--	4.0	52	--	--	--	--
25...	1156	17.0	260	7.1	28.5	--	3.8	49	--	--	47	--

SAN JACINTO RIVER BASIN

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

300158095074601 - LAKE HOUSTON SITE EC

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SI02) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
FEB												
18...	8.6	1.5	8.0	.7	1.1	21	4.0	14	<.10	6.6	58	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	8.6	1.5	8.2	.7	1.3	21	3.9	15	<.10	6.9	59	.161
APR												
28...	16	2.4	21	1	2.2	49	8.0	30	.15	6.8	117	.079
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	15	2.3	19	1	1.9	40	6.9	28	.12	8.4	106	--
JUN												
24...	17	2.5	29	2	2.8	59	9.2	37	.13	5.7	138	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	19	2.7	31	2	2.8	62	10	40	.14	4.7	148	--
AUG												
25...	16	2.3	34	2	3.3	57	9.8	42	.16	10	152	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	15	2.3	30	2	3.0	51	9.0	37	.14	12	140	.047

300158095074601 - LAKE HOUSTON SITE EC

DATE	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, ORGANIC (MG/L AS N) (00605)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)
FEB												
18...	<.010	.169	.023	1.1	.96	.52	.54	.98	.073	<.010	.018	.06
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	.010	.171	.034	1.1	.94	.60	.63	.98	.070	<.010	.020	.06
APR												
28...	.015	.094	.084	.78	.60	.33	.41	.68	.086	.041	.032	.10
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	.012	<.050	.091	--	.62	.31	.40	.71	.092	.020	.022	.07
JUN												
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	<.010	<.050	.031	--	.66	.30	.33	.69	.180	.053	.058	.18
AUG												
25...	<.010	<.050	.044	--	.74	.28	.32	.78	.151	.067	.076	.23
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	.015	.062	.120	.62	.44	.27	.39	.56	.163	.060	.070	.21

300158095074601 - LAKE HOUSTON SITE EC

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CHLOROPHYTOPLANKTON CHROMO FLUOROM (UG/L) (70953)	CHLOROPHYTOPLANKTON CHROMO FLUOROM (UG/L) (70954)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	PCB, TOTAL (UG/L) (39516)	PCNS UNFILTR RECOVER (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLORDANE, TECHNICAL TOTAL (UG/L) (39350)	P,P'-DDD UNFILTR RECOVER (UG/L) (39360)	P,P'-DDE, TOTAL (UG/L) (39365)
FEB												
18...	16	14	1.30	<.100	280	38	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	17	14	--	--	340	36	--	--	--	--	--	--
APR												
28...	9.4	7.1	3.20	E.130	59	18	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	8.9	7.0	--	--	120	23	--	--	--	--	--	--
JUN												
24...	--	--	--	--	<10	9.8	<.100	<.100	<.010	<.100	<.010	<.010
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	10	6.8	--	--	10	46	--	--	--	--	--	--
AUG												
25...	7.7	5.8	1.50	.120	<10	6.9	<.100	<.100	<.010	<.100	<.010	<.010
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	6.7	5.4	--	--	16	78	--	--	--	--	--	--

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

300158095074601 - LAKE HOUSTON SITE EC

DATE	P,P'-DDT UNFILT RECOVER (UG/L) (39370)	DI-AZINON, TOTAL (UG/L) (39570)	DI-ELDRIN TOTAL (UG/L) (39380)	DISUL-FOTON UNFILT RECOVER (UG/L) (39011)	ENDO-SULFAN I TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA-THION, TOTAL (UG/L) (39530)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)
FEB												
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
24...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
24...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
25...	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010	<.010
25...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--

300158095074601 - LAKE HOUSTON SITE EC

DATE	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)	PER-THANE TOTAL (UG/L) (39034)	PHORATE TOTAL (UG/L) (39023)	SILVEX, TOTAL (UG/L) (39760)	TOX-APHENE, TOTAL (UG/L) (39400)	TOTAL TRI-THION (UG/L) (39786)	2,4-D, TOTAL (UG/L) (39730)	2,4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)
FEB											
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
APR											
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	<.010	<.010	<.010	<.100	<.010	<.010	<1.00	<.010	.010	<.010	<.010
24...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	<.010	<.010	<.010	<.100	<.010	<.010	<1.00	<.010	<.010	<.010	<.010
25...	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--

300209095091201 - LAKE HOUSTON SITE FC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00301)	COLI-FORM, FECAL, (PER-UM-MF) (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB												
18...	1105	1.00	150	7.5	13.0	.10	9.8	93	1400	1300	40	4
18...	1107	12.0	155	7.2	12.5	--	9.5	89	--	--	41	4
APR												
28...	1215	1.00	430	9.0	22.5	.32	9.3	107	20	K12	77	--
28...	1217	10.0	450	8.8	22.0	--	8.1	92	--	--	--	--
28...	1219	14.0	465	8.8	22.0	--	8.1	92	--	--	80	--
JUN												
24...	1100	1.00	500	8.9	32.0	.20	6.8	93	K1	K12	81	--
24...	1102	10.0	510	8.7	31.5	--	5.8	79	--	--	82	--
AUG												
25...	1110	1.00	380	8.8	30.5	.30	8.6	115	60	28	57	--
25...	1112	8.00	345	7.4	29.0	--	4.9	64	--	--	58	--

SAN JACINTO RIVER BASIN

08072000 LAKE HOUSTON NEAR SHELDON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

300209095091201 - LAKE HOUSTON SITE FC

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
FEB												
18...	13	1.9	13	.9	2.5	36	6.5	17	<.10	7.3	84	.277
18...	13	1.9	13	.9	2.4	37	6.3	17	<.10	7.3	85	.302
APR												
28...	25	3.5	53	3	4.3	100	16	64	.26	6.3	236	.761
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	26	3.7	57	3	4.4	100	17	67	.26	7.8	251	.963
JUN												
24...	26	3.7	69	3	5.7	110	17	76	.28	11	278	--
24...	27	3.8	74	4	5.9	130	18	78	.30	12	295	.079
AUG												
25...	18	2.6	46	3	5.4	83	14	51	.24	11	207	1.37
25...	19	2.6	42	2	5.6	77	13	41	.23	11	190	1.56

300209095091201 - LAKE HOUSTON SITE FC

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4) (00671)	PHOS- PHATE, ORTHOPHOS- PHATE, DIS- SOLVED (MG/L AS PO4) (00660)
FEB												
18...	.012	.289	.028	1.3	1.0	.51	.54	1.0	.179	.056	.054	.17
18...	.013	.315	.050	1.8	1.4	.55	.60	1.5	.159	.054	.061	.19
APR												
28...	.051	.812	.035	2.0	1.1	.49	.53	1.2	.345	.246	.240	.74
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	.060	1.02	.082	2.2	1.1	.41	.49	1.2	.396	.261	.264	.81
JUN												
24...	.012	<.050	<.020	--	--	--	.49	1.4	.587	.437	.039	.12
24...	.019	.098	.070	1.5	1.4	.53	.60	1.4	.651	.540	.566	1.7
AUG												
25...	.101	1.47	<.020	3.5	--	--	.49	2.0	.771	.543	.503	1.5
25...	.079	1.64	.186	2.9	1.1	.53	.72	1.3	.778	.576	.536	1.6

300209095091201 - LAKE HOUSTON SITE FC

DATE	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70954)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PCB, TOTAL (UG/L) (39516)	PCNS UNFILT RECOVER (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR- DANE, TECH- NICAL TOTAL (UG/L) (39350)	P,P'- DDD UNFILT RECOVER (UG/L) (39360)	P,P'- DDE, TOTAL (UG/L) (39365)
FEB												
18...	19	12	4.50	E.150	110	17	--	--	--	--	--	--
18...	18	11	--	--	130	19	--	--	--	--	--	--
APR												
28...	13	6.7	18.0	.580	14	<4.0	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--	--
28...	12	6.4	--	--	<10	<4.0	--	--	--	--	--	--
JUN												
24...	12	7.0	7.80	.320	<10	<4.0	<.100	<.100	<.010	<.100	<.010	<.010
24...	9.9	6.8	--	--	<10	<4.0	--	--	--	--	--	--
AUG												
25...	12	6.3	7.40	.760	<10	5.5	<.100	<.100	<.010	<.100	<.010	<.010
25...	11	6.8	--	--	14	19	--	--	--	--	--	--

SAN JACINTO RIVER BASIN

08072050 SAN JACINTO RIVER NEAR SHELDON, TX

LOCATION.--Lat 29°52'34", long 95°05'37", Harris County, Hydrologic Unit 12040104, on left bank at U.S. Highway 90 bridge, 0.3 mi downstream from Southern Pacific Railway Co. bridge, 1.5 mi east of Sheldon, 4.6 mi downstream from Lake Houston, and 21 mi northeast of Houston.

DRAINAGE AREA.--2,879 mi².

PERIOD OF RECORD.--Feb 1970 to current year (elevations prior to 1973; gage heights only, beginning 1973). Eleven discharge measurements, May 19, 1989 to Oct 19, 1995.

Water-quality records.--Chemical and biochemical analyses: Feb 1970 to Sep 1972. Pesticide analyses: May 1971 to Sep 1972.

GAGE.--Water-stage recorder. Datum of gage is 0.69 ft below sea level, adjustment of 1973. Prior records unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. Gage heights reflect tidal fluctuations.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 27.09 ft Oct 19, 1994; minimum, -2.52 ft Oct 28, 1985. A discharge measurement of 356,000 ft³/s was made near the peak of Oct 19, 1994 (gage height, 27.00 ft).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation since at least 1875, 31.5 ft Nov 26, 1940, at site 0.3 mi upstream at Southern Pacific Railway Co. bridge.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.23 ft, Jan 9; minimum gage height, -2.25 ft, Mar 9.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	1.87	.65	2.59	.56	2.95	1.68	2.30	.56	3.80	1.73	5.48	5.02
2	2.43	1.18	1.71	-.16	3.79	1.92	2.39	.79	2.78	1.37	5.32	3.69
3	2.62	1.18	1.62	-.61	4.01	.64	2.39	1.19	2.26	.87	3.69	2.50
4	2.66	1.64	1.97	.08	2.04	.86	2.74	1.89	2.84	.61	3.46	2.29
5	2.80	1.65	3.01	1.20	2.59	1.40	3.10	1.86	2.91	1.29	3.42	2.10
6	2.82	1.76	2.55	-.22	2.89	1.75	3.76	1.96	2.43	.26	2.64	.71
7	3.51	2.39	1.50	-.07	3.62	2.01	10.73	3.65	1.89	-.06	3.09	1.29
8	3.69	2.59	2.03	.68	4.19	2.34	12.98	10.73	2.45	.52	2.96	-1.22
9	4.30	2.52	2.18	.82	2.91	1.69	13.23	12.22	2.84	.88	-.03	-2.25
10	4.13	2.58	2.45	.71	1.80	.16	12.22	8.79	3.31	2.03	1.37	-.70
11	4.78	2.67	2.11	.59	1.28	-.42	8.79	5.64	2.77	.11	2.27	.46
12	4.99	3.44	2.86	1.39	1.24	-.37	5.64	3.72	2.51	.86	2.34	.82
13	4.56	2.74	2.60	.78	1.59	-.38	4.34	3.42	2.96	1.69	2.68	1.54
14	3.00	2.06	2.25	.28	1.57	-.79	4.43	3.46	3.54	2.37	2.60	1.40
15	3.36	2.02	2.08	-.38	1.61	-.28	4.26	2.15	4.01	3.30	3.17	1.72
16	3.25	1.49	1.71	-.35	1.61	.03	2.79	2.38	3.65	2.57	4.74	2.61
17	3.07	1.11	2.10	.40	1.56	-.13	2.96	.71	3.72	2.05	3.76	2.97
18	3.06	1.26	2.21	.87	1.58	.05	2.32	.99	3.24	1.85	3.73	2.93
19	2.98	1.14	2.39	.32	1.65	.40	2.16	.00	3.31	2.50	3.67	2.53
20	2.88	.96	2.17	.83	3.10	1.46	3.66	1.58	2.67	1.38	2.53	.79
21	2.60	.64	2.50	.64	7.39	2.97	4.46	2.84	3.33	.89	2.14	.38
22	2.11	.63	2.03	.82	7.59	5.89	4.96	1.80	3.53	1.20	2.50	.83
23	3.79	1.03	2.02	.88	5.89	4.48	2.71	.88	3.99	3.26	2.50	.34
24	3.38	1.31	2.59	1.42	4.66	4.21	2.51	.47	4.09	3.09	2.63	.97
25	2.81	1.25	2.42	1.12	4.58	3.61	3.19	1.36	4.62	3.52	2.85	1.29
26	1.93	.36	2.44	.99	3.89	2.95	3.53	2.73	5.53	4.20	3.09	1.53
27	1.88	.22	2.69	.93	3.01	1.74	3.30	1.50	6.00	5.53	3.84	2.32
28	2.79	1.52	3.03	1.59	2.77	1.79	2.81	.73	6.02	5.24	3.13	1.70
29	3.07	1.62	3.36	1.90	1.92	-1.31	2.92	1.03	---	---	3.63	1.80
30	3.01	1.59	3.42	2.42	.97	-1.14	3.06	.94	---	---	4.72	2.52
31	2.80	1.00	---	---	1.43	-.62	3.71	2.70	---	---	4.71	1.69
MONTH	4.99	.22	3.42	-.61	7.59	-1.31	13.23	.00	6.02	-.06	5.48	-2.25

SAN JACINTO RIVER BASIN

08072300 BUFFALO BAYOU NEAR KATY, TX

LOCATION.--Lat 29°44'35", long 95°48'24", Fort Bend County, Hydrologic Unit 12040104, on left bank at bridge on Greenbush Road, 2.5 mi downstream from confluence of Willow Fork and Cane Island Branch of Buffalo Bayou, and 3.1 mi southeast of Katy.

DRAINAGE AREA.--63.3 mi².

PERIOD OF RECORD.--Jul 1977 to current year.

Water-quality records.--Chemical and biochemical analyses: Jun 1978 to Sep 1981.

GAGE.--Water-stage recorder. Datum of gage is 75.02 ft above sea level, 1973 adjustment. Gage located at temporary site 250 ft upstream Jan 18 to Sep 30, 1985; all records adjusted to original site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. Stage-discharge relationship affected by seasonal vegetation during most years.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,150 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 13	1000	1,510	32.67	Sep 11	1200	1,840	33.74
Jan 6	2400	1,250	31.71				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	35	76	11	3.8	71	4.5	7.5	3.4	2.3	15	4.5
2	11	21	45	10	5.7	44	7.7	4.3	3.0	2.2	8.0	3.0
3	6.3	18	338	9.2	5.2	32	5.7	2.9	2.9	2.8	26	2.3
4	4.5	19	212	11	4.6	26	4.4	2.7	2.4	3.5	27	1.9
5	4.9	15	118	29	9.0	21	4.0	2.5	4.6	2.8	24	1.6
6	10	32	72	302	9.4	19	4.3	3.0	13	2.1	14	13
7	40	20	163	916	7.6	16	4.9	3.1	3.2	1.9	18	10
8	79	12	605	424	6.7	14	7.4	7.6	2.7	1.8	10	7.4
9	255	23	273	216	4.5	16	3.9	5.3	2.3	1.8	9.7	9.6
10	195	39	155	123	24	11	3.4	3.5	2.0	1.9	7.9	16
11	385	30	103	81	37	8.8	4.5	2.9	2.0	2.4	5.0	1230
12	311	123	55	61	22	7.2	4.1	2.6	2.3	2.8	9.9	745
13	928	121	37	47	16	7.7	4.5	2.5	2.0	3.0	10	538
14	626	78	29	36	17	17	4.4	2.7	2.1	8.8	15	316
15	338	46	22	31	10	14	3.7	2.7	2.5	14	8.8	218
16	214	33	18	24	91	129	3.9	2.9	2.6	12	6.7	316
17	147	23	15	21	143	143	5.3	5.7	2.2	12	6.6	203
18	117	18	13	17	58	61	12	3.6	2.0	28	4.8	105
19	85	17	11	16	76	36	7.8	2.6	1.9	16	4.3	68
20	57	17	175	29	42	25	7.2	2.7	1.7	13	6.6	47
21	45	15	276	20	38	17	5.0	2.6	2.1	17	7.7	35
22	39	13	113	24	647	14	3.6	3.3	3.3	16	35	28
23	74	11	84	23	254	15	3.5	2.6	2.4	17	23	22
24	93	8.4	129	16	129	17	3.1	2.6	2.0	11	21	34
25	63	7.1	77	11	74	12	2.9	2.3	2.1	9.6	24	36
26	37	6.2	57	8.8	474	7.7	2.6	2.5	2.3	13	18	37
27	31	6.0	55	6.7	268	6.4	2.7	2.9	2.8	9.2	12	39
28	50	150	37	5.0	130	6.0	2.9	2.5	2.7	5.7	8.0	25
29	47	274	27	4.0	---	5.1	2.4	2.3	3.5	9.4	5.5	26
30	37	136	19	4.0	---	4.8	4.3	2.8	2.5	15	5.2	26
31	44	---	15	3.5	---	5.7	---	3.1	---	14	5.1	---
TOTAL	4389.7	1366.7	3424	2540.2	2606.5	829.4	140.6	102.8	86.5	272.0	401.8	4163.3
MEAN	142	45.6	110	81.9	93.1	26.8	4.69	3.32	2.88	8.77	13.0	139
MAX	928	274	605	916	647	143	12	7.6	13	28	35	1230
MIN	4.5	6.0	11	3.5	3.8	4.8	2.4	2.3	1.7	1.8	4.3	1.6
AC-FT	8710	2710	6790	5040	5170	1650	279	204	172	540	797	8260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
MEAN	44.2	49.2	63.7	68.8	78.2	38.7	48.8	63.7	67.6	25.9	26.2	52.2											
MAX	236	223	376	224	356	129	330	173	292	136	76.7	320											
(WY)	1995	1983	1992	1979	1992	1992	1991	1993	1993	1981	1989	1979											
MIN	2.07	4.95	2.17	4.64	2.64	1.57	2.91	2.36	2.73	3.43	6.86	1.90											
(WY)	1988	1981	1990	1986	1988	1981	1987	1996	1990	1994	1977	1982											

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

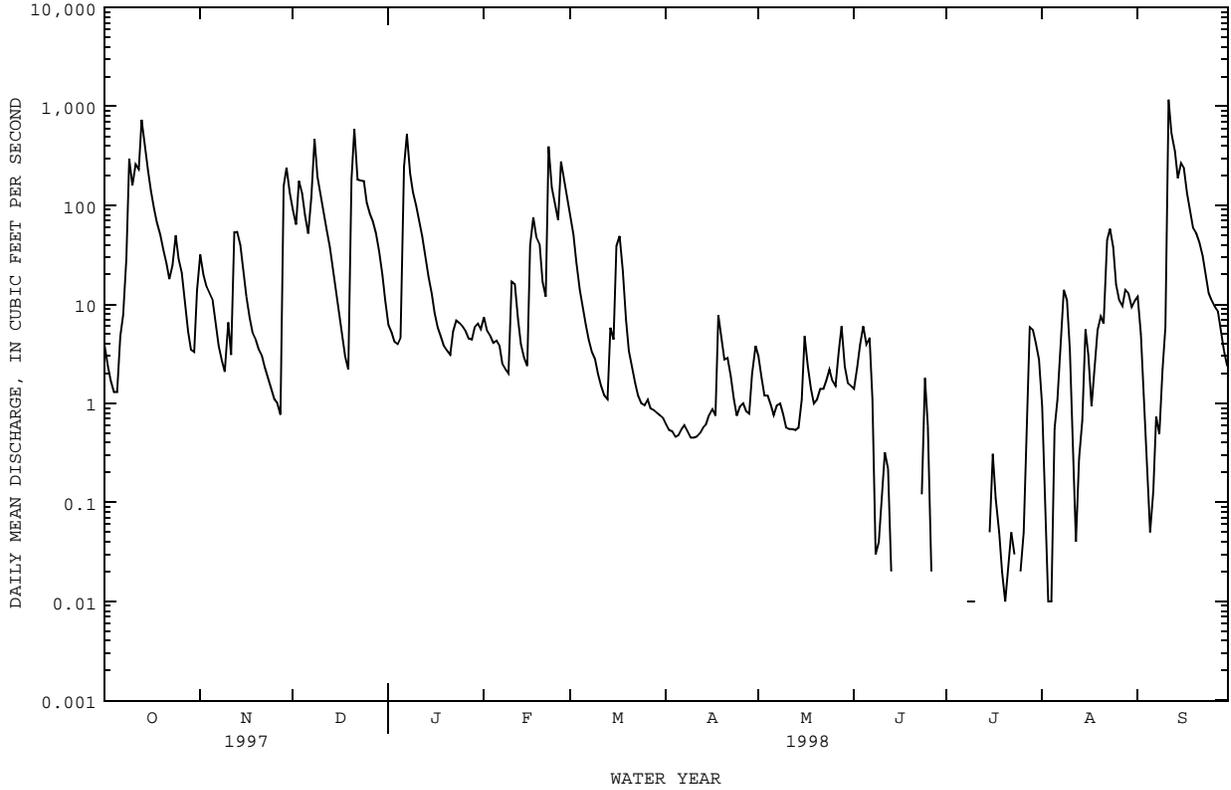
WATER YEARS 1977 - 1998

ANNUAL TOTAL	28748.19	20323.5	
ANNUAL MEAN	78.8	55.7	52.2
HIGHEST ANNUAL MEAN			137
LOWEST ANNUAL MEAN			12.4
HIGHEST DAILY MEAN	928	Oct 13	2810
LOWEST DAILY MEAN	.89	Sep 20	.29
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 14	.34
INSTANTANEOUS PEAK FLOW			1840
INSTANTANEOUS PEAK STAGE			33.74
ANNUAL RUNOFF (AC-FT)	57020	40310	37840
10 PERCENT EXCEEDS	205	139	109
50 PERCENT EXCEEDS	26	13	7.9
90 PERCENT EXCEEDS	4.5	2.6	1.6

08072730 BEAR CREEK NEAR BARKER, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1977 - 1998	
ANNUAL TOTAL	16051.67		14427.66		21.4	
ANNUAL MEAN	44.0		39.5		48.4	1992
HIGHEST ANNUAL MEAN					4.45	1988
LOWEST ANNUAL MEAN					1170	Sep 11 1998
HIGHEST DAILY MEAN	732	Oct 13	1170	Sep 11	1170	Sep 11 1998
LOWEST DAILY MEAN	.25	Jan 7	.00	Jun 14	.00	Nov 20 1977
ANNUAL SEVEN-DAY MINIMUM	.28	Jul 23	.00	Jun 27	.00	Mar 16 1978
INSTANTANEOUS PEAK FLOW			1900	Sep 11	2060	Aug 31 1981
INSTANTANEOUS PEAK STAGE			11.82	Sep 11	16.72	Sep 20 1979
ANNUAL RUNOFF (AC-FT)	31840		28620		15520	
10 PERCENT EXCEEDS	130		124		52	
50 PERCENT EXCEEDS	7.9		3.8		1.9	
90 PERCENT EXCEEDS	.73		.03		.05	

e Estimated



SAN JACINTO RIVER BASIN

08072760 LANGHAM CREEK AT WEST LITTLE YORK ROAD NEAR ADDICKS, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°52'01", long 95°38'47", Harris County, Hydrologic Unit 12040104, at bridge on West Little York Road, 500 ft upstream from former site, 2.1 mi downstream from Dinners Creek, and 5.7 mi north of Addicks.

DRAINAGE AREA.--24.6 mi².

PERIOD OF RECORD.--Jul 1977 to Sep 1980 (daily mean discharge). Oct 1980 to Sep 1982 (peak discharges greater than base discharge and annual maximum), Oct 1982 to Sep 1989 (annual maximum). Oct 1989 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 90.00 ft above sea level, 1973 adjustment. Satellite telemeter at station.

REMARKS.--Records good. No known regulation or diversion. Major channel rectification completed in the summer of 1998.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft³/s May 24, 1997 (gage height 22.62 ft); maximum gage height 24.42 ft Sep 19, 1979; no flow for a few days during period Jul to Sep 1977, and during the 1978 and 1980 water years.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 9	0900	726	18.65	Jan 6	2130	982	19.80
Oct 13	0930	1,200	20.65	Feb 22	0200	620	18.14
Nov 28	1630	720	18.62	Sep 11	1030	1,560	19.47
Dec 7	2230	784	18.92	Sep 13	0830	604	15.66
Dec 20	2130	1,240	20.79				

08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX

LOCATION.--Lat 29°45'43", long 95°33'27", Harris County, Hydrologic Unit 12040104, at downstream side of bridge on West Belt Drive in west Houston, 100 ft downstream from Rummel Creek, 3.5 mi downstream from station 08073500, and 3.7 mi upstream from station 08073700.

DRAINAGE AREA.--307 mi², unadjusted for basin boundary changes.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Sep 1971 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 0.67 ft below sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Stage discharge relationship is affected by seasonal vegetal growth during most years. Since installation of gage in Sep 1971, at least 10% of contributing drainage area has been regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000), 10.1 and 10.3 mi upstream, respectively (total capacity, 315,900 acre-ft), and runoff from highly urbanized areas below these reservoirs. No known diversions. Low flow is mostly sustained by wastewater effluent.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1900	1040	972	308	58	1690	63	41	49	43	51	84
2	1960	960	966	121	183	1780	59	41	41	42	52	57
3	1910	770	891	105	122	1810	55	40	35	83	48	46
4	1770	414	1220	136	96	1190	56	40	38	75	48	40
5	807	241	1800	268	108	650	56	39	95	60	101	39
6	271	186	1240	820	143	1000	65	37	269	51	86	87
7	433	124	329	1440	60	328	57	42	168	44	206	177
8	492	98	1200	1100	124	303	56	263	84	42	207	189
9	960	76	1530	1650	77	107	50	324	59	42	148	114
10	222	236	1570	1800	508	92	53	55	50	40	93	328
11	603	214	1560	1100	541	78	59	51	44	40	66	3520
12	382	389	1680	115	304	64	55	44	43	38	58	1980
13	1310	185	1640	85	175	46	53	42	41	38	52	509
14	1050	641	1570	75	127	210	51	44	40	177	142	207
15	1750	1290	1420	518	110	293	37	44	44	86	219	426
16	1930	787	528	1640	486	272	36	52	47	71	139	625
17	2000	246	159	1810	749	632	37	52	41	85	112	712
18	1960	187	122	1940	1130	924	117	50	41	155	356	1530
19	1930	162	103	1830	875	348	100	45	37	115	166	1500
20	1890	128	149	1080	647	228	96	44	37	89	118	1470
21	1410	115	355	310	457	123	52	40	37	75	161	1540
22	771	106	811	438	1190	60	46	40	38	67	380	1680
23	308	97	566	465	877	52	44	52	48	55	364	1640
24	443	92	769	350	1660	50	42	47	55	53	294	1590
25	714	79	1520	189	898	48	41	43	51	49	683	539
26	602	85	1470	176	832	47	40	44	46	47	473	698
27	1270	81	1440	137	1170	49	47	48	51	47	191	1070
28	1530	261	1400	113	1570	48	46	79	66	50	101	1470
29	1420	784	1450	99	---	45	45	61	63	49	70	1840
30	1120	803	1640	98	---	290	43	49	50	49	102	1960
31	1070	---	1410	85	---	92	---	55	---	49	126	---
TOTAL	36188	10877	33480	20401	15277	12949	1657	1948	1808	2006	5413	27667
MEAN	1167	363	1080	658	546	418	55.2	62.8	60.3	64.7	175	922
MAX	2000	1290	1800	1940	1660	1810	117	324	269	177	683	3520
MIN	222	76	103	75	58	45	36	37	35	38	48	39
AC-FT	71780	21570	66410	40470	30300	25680	3290	3860	3590	3980	10740	54880

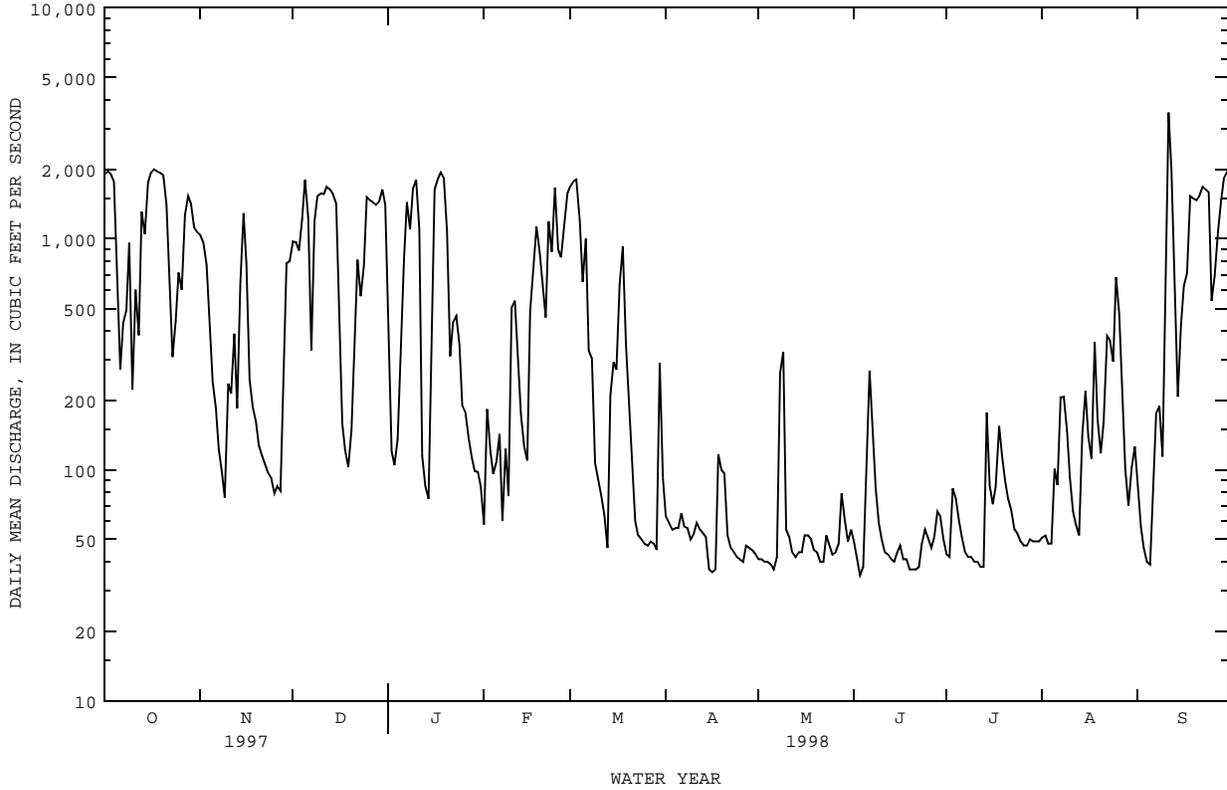
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
MEAN	299	343	367	406	423	329	323	369	449	268	199	352
MAX	1167	1027	1080	1133	1619	1701	1639	965	1129	956	784	1278
(WY)	1998	1995	1998	1992	1992	1992	1992	1992	1973	1993	1983	1981
MIN	58.5	38.4	62.4	84.8	36.2	39.6	46.0	54.5	60.3	63.1	67.4	60.0
(WY)	1979	1972	1990	1986	1976	1976	1978	1996	1998	1996	1980	1988

SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1971 - 1998	
ANNUAL TOTAL	240082		169671			
ANNUAL MEAN	658		465		343	
HIGHEST ANNUAL MEAN					854	1992
LOWEST ANNUAL MEAN					142	1988
HIGHEST DAILY MEAN	2760	Sep 23	3520	Sep 11	3820	Aug 31 1981
LOWEST DAILY MEAN	25	Sep 16	35	Jun 3	16	Jul 3 1995
ANNUAL SEVEN-DAY MINIMUM	32	Sep 14	40	Jun 16	19	Mar 14 1996
INSTANTANEOUS PEAK FLOW			4120	Sep 11	7290	Mar 4 1992
INSTANTANEOUS PEAK STAGE			61.18	Sep 11	68.30	Mar 4 1992
ANNUAL RUNOFF (AC-FT)	476200		336500		248400	
10 PERCENT EXCEEDS	1640		1530		1020	
50 PERCENT EXCEEDS	452		126		110	
90 PERCENT EXCEEDS	64		43		46	



08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Jun 1978 to current year. Chemical and biochemical analyses: Jun 1978 to Aug 1986.
Pesticide analyses: Jun 1978 to Mar 1983. Sediment analyses: May 1979 to Aug 1986.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Jun 1979 to Sep 1981.
WATER TEMPERATURE: Jun 1979 to Sep 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 922 microsiemens, Jun 25, 1979; minimum daily, 78 microsiemens, Aug 31, 1981.
WATER TEMPERATURE: Maximum daily, 30.5°C, Jul 1, 1979; minimum daily, 1.0°C, Nov 27, 1980.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	BOD OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (80082)	
FEB 09...	1206	87	742	7.9	17.5	27	24	8.5	89	3.4	2.2
MAY 20...	0806	39	880	7.9	25.0	25	18	5.3	64	2.9	2.1
AUG 08...	0910	209	800	7.7	30.0	23	21	6.2	82	2.5	4.0
SEP 08...	0855	119	480	7.5	28.0	100	73	6.2	79	2.0	1.1

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 09...	--	150	46	8.8	86	3	6.5	180	28	87
MAY 20...	--	160	48	8.8	112	4	8.8	200	36	120
AUG 08...	--	140	43	7.9	100	4	8.6	170	33	100
SEP 08...	--	89	28	4.7	55	3	7.8	120	19	57

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
FEB 09...	.34	17	414	6	3	3	4.54	.122	4.66	1.12
MAY 20...	.48	17	499	1	6	.00	4.76	.429	5.19	.834
AUG 08...	.42	20	439	49	11	38	3.87	.144	4.01	.539
SEP 08...	.32	13	269	148	30	118	2.86	.112	2.97	.196

SAN JACINTO RIVER BASIN

08073600 BUFFALO BAYOU AT WEST BELT DRIVE, HOUSTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
FEB 09...	--	--	.55	1.7	--	--	1.90	1.85	5.7	6.7
MAY 20...	--	--	.63	1.5	--	--	1.73	1.65	5.1	7.3
AUG 08...	--	--	.75	1.3	--	--	1.41	1.22	3.8	6.4
SEP 08...	--	--	.59	.78	--	--	.995	.897	2.8	10

08073700 BUFFALO BAYOU AT PINEY POINT, TX

LOCATION.--Lat 29°44'48", long 95°31'24", Harris County, Hydrologic Unit 12040104, on right bank at upstream side of bridge on Piney Point Road, village of Piney Point, 3.7 mi downstream from Rummel Creek, 7.2 mi downstream from gage near Addicks (station 08073500), and 12.5 mi upstream from gage at Houston (station 08074000).

DRAINAGE AREA.--317 mi².

PERIOD OF RECORD.--Oct 1963 to Sep 1976 and Oct 1984 to current year. Oct 1976 to Sep 1984 (gage heights only).
Water-quality records.--Chemical, biochemical, and pesticide analyses: Oct 1970 to Sep 1978.

GAGE.--Water-stage recorder. Datum of gage is 1.35 ft below sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct 1963, at least 10% of contributing drainage area has been regulated by Barker and Addicks Reservoirs (stations 08072500 and 08073000), 14.0 and 13.8 mi upstream from gage, respectively (total capacity, 315,900 acre-ft), and runoff from highly urbanized areas below these reservoirs. No known diversions. Low flow is mostly sustained by wastewater effluent.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1970	1030	938	397	70	1770	65	42	55	50	57	93
2	2030	959	1090	133	171	1850	61	43	49	47	61	69
3	1990	743	986	118	127	1900	59	43	43	99	56	60
4	1860	480	1230	133	100	1350	59	41	43	77	57	55
5	888	269	1910	251	108	599	58	41	71	65	106	51
6	267	203	1520	822	136	1050	66	40	287	55	97	112
7	462	144	373	1870	69	368	62	41	156	48	192	144
8	618	121	1400	1060	120	287	62	203	88	45	191	192
9	1130	101	1620	1730	84	115	56	330	64	44	139	124
10	255	232	1690	1910	576	98	55	61	54	43	102	323
11	672	230	1660	1330	534	86	63	57	48	43	74	4270
12	443	452	1810	141	306	80	59	52	48	41	64	2240
13	1540	208	1770	105	170	57	58	50	46	41	58	579
14	971	549	1680	90	128	197	59	51	45	149	134	210
15	1730	1300	1530	404	113	288	44	52	47	120	192	432
16	1980	849	648	1670	519	342	43	59	54	79	142	697
17	2100	251	171	1880	691	524	40	56	47	74	100	616
18	2030	190	138	2050	1150	998	119	55	47	183	395	1540
19	1990	166	121	1930	923	331	77	53	42	113	153	1520
20	1950	137	155	1240	668	225	105	50	43	91	106	1480
21	1510	123	327	379	450	129	55	48	42	81	150	1580
22	802	111	844	687	1550	68	48	46	42	76	446	1720
23	468	99	634	415	774	64	44	55	58	64	332	1630
24	402	89	725	375	1750	59	44	53	59	59	248	1590
25	720	79	1600	181	1030	59	43	50	57	56	637	628
26	527	81	1540	176	862	54	41	50	50	53	504	620
27	1200	81	1500	134	1150	55	48	55	59	54	181	1060
28	1540	226	1460	114	1600	56	49	77	74	54	106	1390
29	1470	763	1490	104	---	53	46	65	75	54	80	1790
30	1120	803	1720	102	---	250	43	55	57	56	79	1920
31	1070	---	1540	96	---	107	---	58	---	56	145	---
TOTAL	37705	11069	35820	22027	15929	13469	1731	2032	1950	2170	5384	28735
MEAN	1216	369	1155	711	569	434	57.7	65.5	65.0	70.0	174	958
MAX	2100	1300	1910	2050	1750	1900	119	330	287	183	637	4270
MIN	255	79	121	90	69	53	40	40	42	41	56	51
AC-FT	74790	21960	71050	43690	31600	26720	3430	4030	3870	4300	10680	57000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998h, BY WATER YEAR (WY)

MEAN	294	330	309	348	392	366	324	424	459	244	194	293
MAX	1216	1068	1155	1156	1673	1804	1708	1584	1296	1027	534	958
(WY)	1998	1995	1998	1992	1992	1992	1992	1968	1992	1993	1989	1998
MIN	30.4	11.2	31.5	28.3	29.9	13.8	22.6	37.9	30.9	58.5	61.8	70.5
(WY)	1964	1967	1971	1971	1967	1967	1965	1964	1965	1965	1967	1988

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1964 - 1998h
ANNUAL TOTAL	249222	178021	
ANNUAL MEAN	683	488	329
HIGHEST ANNUAL MEAN			907
LOWEST ANNUAL MEAN			77.5
HIGHEST DAILY MEAN	3120	Sep 23	4270
LOWEST DAILY MEAN	32	Sep 16	40
ANNUAL SEVEN-DAY MINIMUM	40	Sep 14	42
INSTANTANEOUS PEAK FLOW			5750
INSTANTANEOUS PEAK STAGE			59.82
ANNUAL RUNOFF (AC-FT)	494300	353100	238300
10 PERCENT EXCEEDS	1710	1600	990
50 PERCENT EXCEEDS	452	134	107
90 PERCENT EXCEEDS	72	48	31

h See PERIOD OF RECORD paragraph.

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Oct 1968 to Jul 1981. Pesticide analyses: Feb 1969 to Jul 1981.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Apr 1986 to current year.
 WATER TEMPERATURE: Apr 1986 to current year.
 DISSOLVED OXYGEN: Apr 1986 to current year.

INSTRUMENTATION.--Since Apr 1986, a three-parameter water-quality monitor continuously records specific conductance, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,040 microsiemens, Dec 1, 1994; minimum, 29 microsiemens, May 8, 1995.
 WATER TEMPERATURE: Maximum, 32.8°C, Jul 12, 1998; minimum, 4.5°C, Jan 13, 1997.
 DISSOLVED OXYGEN: Maximum, 16.5 mg/L, Apr 10, 1996; minimum, 0.2 mg/L, May 14-15, 1998.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 950 microsiemens, Apr 18; minimum, 70 microsiemens, Mar 16.
 WATER TEMPERATURE: Maximum, 32.8°C, Jul 12; minimum, 9.4°C, Dec 15-16.
 DISSOLVED OXYGEN: Maximum, 14.6 mg/L, May 4; minimum, 0.2 mg/L, May 14-15.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	144	129	133	173	159	163	190	164	178	294	181	226
2	152	138	145	193	173	183	176	151	157	523	293	402
3	171	152	160	263	193	225	198	122	158	580	523	554
4	206	171	185	278	216	236	207	180	186	625	408	582
5	274	206	224	413	278	335	181	138	153	620	442	574
6	391	242	308	420	322	373	162	132	137	541	102	329
7	388	175	302	551	420	490	288	147	232	165	83	119
8	287	169	223	528	483	503	211	110	156	188	154	177
9	206	126	167	535	489	510	209	142	155	154	118	125
10	338	175	261	548	425	487	145	132	139	122	107	115
11	347	167	251	477	366	426	140	126	133	152	105	113
12	272	174	234	397	201	253	140	127	134	410	152	285
13	303	120	190	344	229	298	134	126	131	497	348	444
14	205	158	189	415	328	368	140	129	132	529	442	496
15	202	165	173	331	201	215	169	140	152	583	528	556
16	165	157	161	250	215	226	216	169	189	589	118	177
17	160	151	155	366	250	318	463	216	326	126	119	122
18	158	154	156	441	365	397	547	463	504	147	123	129
19	156	153	154	480	432	450	601	545	571	188	147	163
20	156	152	154	541	480	503	631	179	560	248	188	208
21	174	154	162	588	541	564	441	196	354	368	103	285
22	186	174	181	621	582	600	405	135	221	292	100	167
23	241	170	203	649	621	630	210	146	175	397	292	364
24	302	183	225	682	649	667	287	181	242	402	330	347
25	312	190	212	727	677	706	280	122	136	468	364	433
26	217	196	211	733	695	713	134	120	127	516	364	464
27	209	167	184	770	719	749	143	133	136	589	491	530
28	169	145	157	779	135	608	146	134	139	635	589	610
29	149	141	145	539	181	304	150	140	145	667	633	650
30	176	149	160	201	168	186	156	138	144	692	619	672
31	172	159	166	---	---	---	181	154	164	728	675	711
MONTH	391	120	191	779	135	423	631	110	209	728	83	359

SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	739	719	727	194	169	187	749	642	701	905	891	899
2	754	681	734	180	138	166	---	749	---	927	905	917
3	703	635	662	179	170	173	898	---	---	924	906	915
4	690	637	671	209	177	188	900	892	897	926	892	907
5	708	610	687	248	209	235	914	895	902	921	869	893
6	653	614	636	262	156	197	911	901	906	904	876	895
7	673	619	656	303	209	254	905	875	895	927	904	919
8	771	672	702	603	303	400	912	897	904	947	903	925
9	777	643	694	502	373	431	930	907	920	945	689	756
10	735	149	513	691	502	607	929	911	926	745	689	720
11	364	205	295	755	691	729	---	---	---	843	745	784
12	392	332	354	771	744	756	---	---	---	889	843	871
13	452	384	415	786	764	775	---	---	---	887	869	876
14	517	452	491	780	578	714	---	---	---	920	883	903
15	592	512	549	602	498	539	---	---	---	936	842	916
16	617	217	449	547	70	321	---	---	---	946	916	928
17	340	202	262	466	219	329	949	---	---	943	898	922
18	301	214	231	468	231	253	950	570	804	926	871	906
19	242	185	211	316	270	292	673	493	567	930	887	909
20	271	229	243	417	316	365	689	495	588	887	834	862
21	300	111	270	516	386	457	778	650	715	906	859	885
22	203	88	133	580	516	542	798	768	785	917	894	905
23	278	203	236	710	580	651	840	793	812	924	905	912
24	231	123	140	785	707	745	842	826	836	918	894	910
25	166	129	146	833	784	810	864	828	841	916	871	900
26	231	160	198	874	824	851	871	841	859	903	889	894
27	239	189	205	886	863	876	885	779	861	907	863	895
28	205	191	194	906	886	900	889	840	871	902	877	893
29	---	---	---	900	888	893	897	859	884	900	877	894
30	---	---	---	901	893	897	891	821	861	899	831	846
31	---	---	---	899	579	637	---	---	---	868	841	859
MONTH	777	88	418	906	70	522	---	---	---	947	689	884
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	855	820	839	759	664	706	---	---	---	---	---	---
2	862	836	847	806	742	777	---	---	---	649	607	625
3	881	851	869	801	324	667	---	---	---	701	649	677
4	903	---	---	540	439	486	---	---	---	735	680	709
5	904	634	884	689	525	637	811	163	709	788	724	755
6	746	354	466	702	669	687	651	274	508	785	347	707
7	685	354	532	714	669	693	630	430	549	544	366	470
8	646	508	582	746	702	719	578	380	474	707	73	499
9	691	645	672	767	732	744	587	425	542	390	252	334
10	763	691	735	804	766	785	613	545	578	440	180	357
11	838	755	796	802	790	795	631	485	574	191	77	98
12	863	815	833	798	776	788	677	631	662	163	84	114
13	882	839	857	798	768	788	713	677	700	274	163	227
14	908	861	884	795	78	685	747	707	732	372	260	321
15	908	798	857	595	233	370	753	373	561	398	186	326
16	843	728	815	654	368	492	628	441	472	281	219	248
17	861	803	837	751	320	700	580	418	497	337	271	318
18	879	798	839	634	286	438	623	224	526	294	122	135
19	---	---	---	678	350	525	439	231	320	126	116	121
20	---	---	---	662	614	634	---	439	---	128	117	122
21	---	---	---	663	373	636	---	298	---	152	114	123
22	---	---	---	723	662	692	408	204	293	135	112	120
23	854	804	837	741	694	720	405	205	294	123	114	117
24	845	806	836	742	668	713	419	194	265	127	117	122
25	806	662	757	785	742	767	---	318	---	205	125	171
26	796	758	776	791	753	775	415	315	349	265	194	232
27	766	584	698	819	778	802	438	369	406	197	141	160
28	752	243	568	811	796	804	528	438	485	156	116	134
29	629	347	549	796	774	785	596	524	550	122	112	116
30	703	594	658	806	774	788	644	596	612	123	114	119
31	---	---	---	797	774	787	---	---	---	---	---	---
MONTH	---	---	---	819	78	690	---	---	---	---	---	---

SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	25.6	25.1	25.3	20.7	19.3	20.1	17.1	15.9	16.4	12.3	10.6	11.4
2	25.7	25.3	25.5	20.3	19.0	19.9	15.9	15.2	15.4	14.8	12.3	13.4
3	25.6	25.1	25.3	19.2	18.2	18.8	16.5	15.2	16.0	16.8	14.7	15.9
4	25.3	24.7	25.1	18.8	18.0	18.3	16.1	14.2	15.1	19.1	16.8	---
5	25.9	24.7	25.3	20.4	18.2	19.0	14.4	13.3	14.0	19.9	18.3	19.0
6	26.4	25.1	25.7	20.4	18.9	19.7	13.3	12.4	13.0	20.0	18.2	19.5
7	26.0	24.7	25.3	18.9	17.4	18.0	15.3	12.4	13.1	18.2	16.1	17.6
8	25.1	24.6	24.9	17.4	16.5	17.0	15.6	14.9	15.4	16.1	13.8	---
9	25.0	24.4	24.7	17.7	16.5	17.1	15.3	14.2	14.7	14.0	13.7	13.9
10	25.5	24.6	25.1	17.6	17.1	17.2	15.5	14.9	15.2	13.8	13.5	13.7
11	25.5	24.6	25.1	17.1	16.1	16.5	14.9	13.5	14.3	14.6	13.7	14.0
12	26.1	25.0	25.5	16.1	15.7	16.0	13.5	12.3	12.9	17.7	14.6	16.2
13	26.1	22.0	23.9	16.8	16.0	16.4	12.3	10.7	11.4	18.5	17.7	18.2
14	22.0	20.1	21.5	16.9	16.0	16.4	10.7	9.6	10.2	18.0	17.6	17.7
15	22.0	20.0	21.7	16.4	14.1	15.0	9.7	9.4	9.6	17.6	15.2	16.5
16	21.5	21.0	21.3	14.1	11.8	12.9	11.1	9.4	10.5	15.5	13.8	14.1
17	21.0	20.5	20.7	12.4	11.5	11.9	12.8	10.9	11.7	14.3	13.9	14.0
18	20.6	20.2	20.4	13.0	12.0	12.4	13.3	12.2	12.8	14.8	14.1	14.4
19	20.6	20.2	20.4	13.9	12.9	13.4	14.9	13.0	14.0	15.0	14.3	14.8
20	20.8	20.3	20.5	15.2	13.9	14.4	18.1	14.9	16.0	14.8	14.3	14.6
21	20.9	20.3	20.6	16.3	15.2	16.0	18.3	17.0	17.7	19.0	14.8	16.2
22	20.8	20.4	20.6	16.6	15.7	16.1	17.0	16.1	16.4	18.8	17.4	18.4
23	22.0	20.1	20.8	16.5	15.5	15.9	16.3	16.0	16.1	17.4	15.3	16.5
24	23.6	21.8	22.6	16.5	15.3	15.9	16.1	14.9	15.9	15.3	14.3	14.7
25	23.5	21.5	21.9	18.0	16.3	17.1	14.9	14.4	14.6	14.7	13.3	14.0
26	21.9	19.4	20.5	18.8	17.7	18.2	14.4	13.4	14.0	15.8	14.4	15.1
27	19.4	18.7	19.1	20.2	18.5	19.3	13.4	12.0	12.7	15.8	14.4	15.1
28	18.7	18.1	18.5	21.7	19.9	20.3	12.0	11.3	11.7	15.8	14.4	15.1
29	18.1	17.7	17.9	20.3	18.5	19.7	11.3	10.4	10.9	16.7	15.1	15.8
30	19.3	17.7	18.3	18.5	17.1	18.0	10.5	10.2	10.4	18.0	16.1	16.9
31	19.3	18.6	19.0	---	---	---	10.7	10.2	10.5	17.8	17.2	17.5
MONTH	26.4	17.7	22.4	21.7	11.5	16.9	18.3	9.4	13.6	20.0	10.6	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.7	17.3	---	16.5	15.6	16.1	23.0	20.8	22.0	25.3	22.1	23.4
2	17.3	16.3	16.7	15.8	15.3	15.6	21.9	20.7	---	25.1	23.4	24.3
3	16.9	15.6	16.3	15.4	14.9	15.2	23.0	---	---	26.2	23.7	24.8
4	16.6	15.3	15.9	15.5	14.9	15.2	22.7	20.4	21.5	26.6	24.7	25.6
5	15.6	14.4	15.0	17.9	15.5	16.8	22.3	20.0	21.1	26.2	24.6	24.9
6	15.4	14.1	14.5	18.1	17.3	17.9	21.7	20.3	20.9	26.0	24.1	24.9
7	14.7	13.1	14.0	18.9	17.7	18.2	23.5	20.8	21.9	27.9	24.8	26.2
8	15.4	13.1	14.2	18.3	16.3	17.5	25.0	22.7	23.6	27.6	26.3	26.9
9	17.0	15.2	16.0	16.4	14.8	15.5	24.0	21.8	22.9	27.5	25.6	26.5
10	18.3	17.0	17.5	15.5	13.6	14.5	---	---	---	27.4	24.9	26.1
11	17.5	16.2	16.9	15.5	13.4	14.4	---	---	---	27.4	24.9	26.1
12	16.6	15.1	15.9	14.6	13.7	14.1	---	---	---	27.2	25.6	26.4
13	16.6	15.0	15.8	14.7	13.6	14.0	---	---	---	26.9	25.5	25.9
14	16.4	15.6	16.0	16.0	14.4	15.1	---	---	---	26.6	25.3	25.8
15	15.9	15.5	15.7	17.3	15.6	16.5	---	---	---	27.4	25.7	26.5
16	15.8	12.4	14.9	17.8	16.7	17.2	25.9	---	---	28.4	26.3	27.2
17	14.4	12.3	13.4	19.8	17.3	18.5	22.0	16.9	20.6	28.7	26.4	27.5
18	14.2	13.3	13.8	19.4	18.2	19.0	20.9	18.3	19.3	28.6	26.3	27.5
19	15.6	13.7	14.8	21.2	19.2	20.1	21.0	18.1	19.4	28.3	26.2	27.3
20	16.2	15.0	15.6	20.0	18.1	19.0	22.1	19.3	20.6	28.5	26.4	27.5
21	16.0	14.3	15.5	18.5	16.6	17.6	21.6	20.1	20.8	28.9	26.7	27.8
22	14.8	13.8	14.1	18.6	16.2	17.4	22.3	19.3	20.7	29.1	26.8	27.9
23	15.5	13.6	14.5	19.7	16.7	18.1	22.9	19.8	21.3	28.4	26.8	27.5
24	15.4	14.3	14.8	20.4	18.1	19.2	23.6	21.1	22.1	28.0	---	---
25	17.1	15.4	16.2	21.8	19.3	20.4	23.3	21.5	22.4	28.1	26.6	27.3
26	17.9	16.9	17.4	22.0	20.6	21.3	23.1	22.1	22.3	28.5	26.9	27.6
27	17.9	17.1	17.5	22.1	21.1	21.6	22.7	21.8	22.2	28.5	26.8	27.8
28	17.4	16.5	17.0	23.3	21.5	22.4	23.7	21.1	22.3	29.5	26.9	28.1
29	---	---	---	24.7	22.5	23.4	23.3	21.5	22.5	30.1	27.7	28.8
30	---	---	---	24.3	23.4	23.8	24.0	21.2	22.4	30.9	28.2	29.5
31	---	---	---	24.1	22.6	23.2	---	---	---	31.6	28.8	30.2
MONTH	18.3	12.3	---	24.7	13.4	18.0	---	---	---	31.6	---	---

SAN JACINTO RIVER BASIN

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN																					
													JUNE			JULY			AUGUST			SEPTEMBER		
1	31.6	29.2	30.4	31.6	29.4	30.5	32.3	---	---	29.5	---	---												
2	31.3	29.0	30.2	31.6	29.5	30.5	32.5	---	---	29.9	28.1	28.9												
3	30.5	29.3	29.9	30.9	28.4	29.5	---	---	---	30.3	28.5	29.3												
4	30.3	29.2	---	30.3	27.9	28.9	32.0	---	---	30.5	29.1	29.8												
5	30.1	27.9	29.4	31.3	28.6	29.7	31.7	28.6	30.4	30.2	28.9	29.5												
6	28.3	26.2	26.8	32.0	29.2	30.5	30.7	28.6	29.5	29.8	28.2	28.7												
7	27.8	25.4	26.6	32.5	30.0	31.1	29.9	28.1	28.8	28.9	27.5	28.2												
8	28.1	26.5	27.2	32.1	30.2	31.1	29.4	27.4	28.3	28.6	26.7	27.8												
9	29.6	27.2	28.1	32.4	30.0	31.1	30.6	28.2	29.3	28.9	27.4	28.0												
10	30.3	28.4	29.3	32.6	29.9	31.1	31.2	28.9	30.0	28.5	25.0	26.8												
11	30.5	28.7	29.6	32.5	30.0	31.2	31.9	29.5	30.7	25.0	24.5	24.7												
12	30.5	29.0	29.7	32.8	30.0	31.2	31.8	29.7	30.7	25.8	24.7	25.2												
13	31.2	28.8	29.8	31.7	30.1	30.7	31.8	29.8	30.7	26.2	25.6	25.9												
14	32.0	29.1	30.4	32.0	27.3	30.2	30.4	28.8	29.6	27.8	26.0	26.7												
15	---	29.7	---	30.0	28.3	29.2	29.3	27.9	28.6	27.8	26.8	27.4												
16	---	29.0	---	31.4	28.8	30.0	29.5	27.7	28.6	26.9	26.5	26.7												
17	---	29.7	---	32.3	29.5	30.7	29.0	28.1	28.6	27.8	26.2	26.9												
18	31.8	29.8	30.7	30.8	28.1	29.7	28.6	27.0	28.1	27.0	26.1	26.4												
19	---	30.0	---	30.8	29.4	30.1	28.5	25.6	27.2	26.9	26.3	26.6												
20	---	30.1	---	31.3	28.8	29.9	---	27.7	---	27.3	26.6	26.9												
21	---	---	---	32.2	29.1	30.1	---	27.5	---	27.9	26.9	27.2												
22	31.4	---	---	30.9	29.3	30.0	27.7	26.5	27.0	27.7	27.3	27.5												
23	31.0	29.5	30.1	31.3	29.1	30.1	28.1	26.4	27.1	28.1	27.4	27.7												
24	31.2	29.0	30.0	32.0	29.1	30.4	28.6	26.8	27.6	27.9	27.5	27.7												
25	31.2	29.3	30.2	31.8	29.6	30.7	28.9	---	---	28.0	27.2	27.6												
26	30.8	29.5	30.1	32.2	29.6	30.9	30.0	28.3	29.1	27.5	27.0	27.2												
27	30.6	29.2	29.8	32.5	30.1	31.1	30.3	28.5	29.4	28.0	27.0	27.6												
28	30.0	28.2	29.0	32.0	30.0	30.9	30.5	28.7	29.7	28.4	27.5	27.9												
29	---	27.6	---	31.8	29.6	30.6	31.3	29.2	30.2	28.5	28.0	28.2												
30	30.9	28.6	29.7	32.0	29.5	30.6	30.3	29.1	29.7	28.6	28.1	28.3												
31	---	---	---	32.3	29.6	30.8	---	28.2	---	---	---	---												
MONTH	---	---	---	32.8	27.3	30.4	---	---	---	30.5	---	---												

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN												
													OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	6.8	6.5	6.6	7.9	7.7	7.8	8.9	7.9	8.4	---	---	---												
2	6.5	6.2	6.3	7.9	7.6	7.8	8.9	8.6	8.8	---	---	---												
3	6.3	6.1	6.2	7.9	7.2	7.5	9.3	7.9	8.6	---	---	---												
4	6.2	6.1	6.1	7.6	7.2	7.4	9.6	7.9	8.9	---	---	---												
5	6.2	4.9	5.7	7.4	5.9	6.8	9.6	9.0	9.2	---	---	---												
6	5.7	4.3	4.9	7.0	6.0	6.4	9.6	9.0	9.4	7.7	5.5	6.4												
7	6.6	4.5	5.4	7.3	6.8	7.1	9.4	8.1	8.4	7.7	6.7	7.0												
8	6.5	5.5	6.0	7.5	7.2	7.3	9.8	8.5	9.0	8.1	6.7	7.5												
9	7.0	5.9	6.4	7.4	5.5	6.6	9.4	8.8	9.2	8.2	7.9	8.1												
10	6.2	5.2	5.5	7.5	6.1	7.0	9.4	9.0	9.2	8.3	8.1	8.2												
11	6.9	4.9	5.9	7.6	5.6	6.6	9.6	9.2	9.4	8.3	7.4	8.1												
12	6.2	5.2	5.5	8.6	7.6	8.2	9.8	9.6	9.7	7.4	4.8	6.4												
13	7.2	5.1	6.2	7.9	7.4	7.7	10.2	9.8	10.0	6.0	4.7	5.2												
14	6.8	6.0	6.3	8.0	5.3	6.6	10.5	10.1	10.3	5.3	2.7	4.3												
15	6.9	6.4	6.7	8.9	8.0	8.5	10.8	10.4	10.7	6.6	2.1	3.8												
16	7.0	6.6	6.9	9.6	8.8	9.3	10.8	9.3	10.1	8.2	6.6	8.0												
17	7.2	7.0	7.1	9.7	9.5	9.6	9.3	8.3	8.7	8.3	8.1	8.2												
18	7.2	7.0	7.2	9.6	9.0	9.4	8.4	8.1	8.3	8.4	7.8	8.0												
19	7.3	7.1	7.2	9.2	8.4	8.7	8.3	7.5	7.9	8.2	7.7	7.8												
20	7.4	7.1	7.3	8.6	8.2	8.4	7.6	6.6	7.1	7.9	7.4	7.8												
21	7.4	7.2	7.3	8.3	8.0	8.1	7.5	5.2	6.1	8.4	6.8	7.2												
22	7.6	7.1	7.4	8.1	7.8	8.0	6.9	5.2	6.4	7.8	6.2	7.0												
23	7.5	6.8	7.2	8.3	7.9	8.1	6.7	5.2	6.0	9.3	5.0	6.5												
24	7.0	5.4	6.3	8.4	7.9	8.2	5.3	3.7	4.3	8.1	7.6	8.0												
25	7.6	6.4	7.4	8.4	7.6	8.0	---	---	---	8.0	7.4	7.8												
26	7.8	7.1	7.6	7.9	7.3	7.6	---	---	---	8.1	6.7	7.4												
27	8.0	7.7	7.9	7.6	6.5	7.2	---	---	---	6.7	4.5	5.8												
28	7.9	7.6	7.7	8.3	6.3	7.0	---	---	---	5.3	4.0	4.8												
29	7.8	7.6	7.7	7.4	4.2	6.1	---	---	---	5.2	3.0	4.4												
30	8.1	7.7	7.8	7.9	6.9	7.4	---	---	---	5.8	2.9	4.5												
31	7.9	7.7	7.8	---	---	---	---	---	---	6.3	2.1	5.0												
MONTH	8.1	4.3	6.7	9.7	4.2	7.7	---	---	---	---	---	---												

08074000 BUFFALO BAYOU AT HOUSTON, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.7	2.1	5.4	8.7	7.8	8.4	---	---	---	11.6	6.1	8.3
2	7.1	3.9	6.0	9.1	8.5	8.7	---	---	---	12.0	6.1	8.8
3	8.1	5.4	6.8	9.2	8.6	8.9	7.2	5.7	6.4	12.4	6.1	8.9
4	8.5	5.3	7.1	9.1	8.5	9.0	6.9	4.5	6.1	14.6	5.0	9.2
5	8.2	3.7	6.9	8.5	8.0	8.3	6.8	4.9	6.1	10.1	3.5	6.6
6	7.7	5.5	6.7	8.3	7.9	8.1	6.8	5.0	6.2	8.7	3.4	5.9
7	7.8	.6	4.6	7.9	7.3	7.6	6.8	4.1	6.0	10.0	.6	6.2
8	8.0	.5	4.3	7.8	6.7	7.3	7.0	4.4	5.8	7.7	.4	5.0
9	8.6	2.3	5.4	8.1	7.8	8.0	6.6	5.6	6.0	7.2	4.2	5.8
10	9.4	4.4	6.9	8.5	7.5	8.2	---	---	---	6.2	.4	2.6
11	7.7	6.9	7.2	8.7	6.8	8.3	---	---	---	5.2	.3	2.2
12	8.1	7.2	7.8	8.9	8.1	8.4	---	---	---	7.2	.3	1.5
13	7.8	6.8	7.4	8.5	5.9	7.8	---	---	---	5.3	.3	2.6
14	7.2	5.9	6.8	7.9	6.2	7.3	---	---	---	4.4	.2	1.8
15	7.3	4.4	6.6	7.2	5.9	6.3	---	---	---	7.4	.2	3.3
16	9.2	6.0	7.7	10.4	3.7	6.6	---	---	---	7.1	2.0	5.1
17	9.2	7.7	8.3	6.2	5.1	5.8	---	---	---	8.0	1.6	5.9
18	9.1	8.5	8.7	7.0	6.1	6.7	6.2	4.1	5.3	8.0	3.0	6.3
19	9.7	7.5	8.2	6.7	3.3	6.2	---	---	---	10.3	5.8	7.6
20	8.4	7.8	8.1	6.8	5.2	6.4	---	---	---	10.0	6.2	7.7
21	9.8	6.8	7.7	6.9	4.9	6.3	---	---	---	9.3	5.4	7.0
22	9.7	8.3	9.0	---	---	---	---	---	---	9.9	5.1	7.7
23	9.5	7.9	8.3	---	---	---	---	---	---	8.9	5.8	7.2
24	9.1	8.7	9.0	---	---	---	---	---	---	8.2	5.2	6.7
25	8.8	7.9	8.4	---	---	---	5.0	2.7	3.9	8.4	5.5	6.7
26	8.6	6.6	7.3	---	---	---	---	---	---	7.9	4.9	6.5
27	8.2	6.5	7.3	---	---	---	---	---	---	7.4	3.3	5.8
28	8.2	7.5	7.9	---	---	---	---	---	---	8.2	3.2	6.3
29	---	---	---	---	---	---	---	---	---	7.8	5.0	6.3
30	---	---	---	---	---	---	9.2	4.2	6.9	7.5	5.2	6.1
31	---	---	---	---	---	---	---	---	---	9.0	5.4	6.8
MONTH	9.8	.5	7.2	---	---	---	---	---	---	14.6	.2	5.9
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.1	5.2	6.8	5.7	1.8	4.7	8.7	---	---	---	---	---
2	8.4	5.1	6.4	6.3	2.6	4.7	8.6	---	---	5.8	4.6	5.1
3	6.7	4.1	5.5	6.2	2.7	4.4	7.1	---	---	6.4	5.2	5.7
4	7.0	4.0	5.5	4.2	2.6	3.5	7.2	---	---	7.0	5.3	6.1
5	6.4	3.7	5.0	5.3	3.7	4.4	7.0	4.4	5.7	7.0	5.3	6.2
6	---	---	---	6.0	3.3	4.9	4.5	1.7	3.2	6.8	4.2	5.8
7	---	---	---	6.8	2.7	5.2	4.4	2.0	3.4	5.5	1.3	3.8
8	---	---	---	7.3	4.8	5.9	4.8	1.8	3.3	6.9	4.7	5.6
9	5.0	3.8	4.5	7.9	5.2	6.2	5.5	3.5	4.6	5.3	2.7	4.6
10	5.7	3.6	4.7	7.8	4.8	6.2	5.3	1.5	4.2	6.8	1.3	4.7
11	6.4	2.9	4.8	7.5	4.4	6.1	6.1	2.2	4.6	8.4	6.2	7.2
12	6.6	2.7	5.0	7.7	3.8	5.8	6.1	3.3	4.9	6.9	4.5	5.7
13	6.6	2.8	4.8	7.0	3.2	5.4	6.9	2.8	5.3	6.0	4.4	5.4
14	8.1	4.1	6.0	8.6	2.9	5.4	6.0	5.4	5.7	5.9	5.2	5.6
15	---	4.8	---	3.7	.4	2.6	5.8	3.8	4.4	6.4	5.0	5.6
16	---	2.1	---	5.4	3.7	4.5	5.6	5.0	5.3	6.8	5.7	6.4
17	---	2.6	---	7.9	5.0	6.0	6.1	5.2	5.5	6.5	4.8	5.5
18	6.8	2.9	4.8	5.4	2.8	3.7	5.7	3.6	5.1	5.9	5.6	5.8
19	---	2.7	---	5.8	3.2	4.5	5.0	3.6	4.3	5.8	5.7	5.8
20	---	---	---	6.9	4.4	5.8	5.7	5.0	---	5.7	5.5	5.6
21	---	---	---	8.2	4.6	6.1	4.8	---	---	5.7	5.2	5.3
22	---	---	---	7.7	4.2	6.0	6.2	3.5	5.1	5.4	4.8	4.9
23	6.9	4.7	5.8	6.8	2.3	5.4	5.9	5.0	5.4	4.8	4.6	4.7
24	6.7	3.4	5.7	6.5	3.8	5.5	5.4	---	---	4.8	4.3	4.5
25	6.0	2.6	4.8	7.7	4.6	6.1	---	5.5	---	4.3	3.1	3.6
26	5.9	2.4	4.9	8.3	4.7	6.4	5.6	5.0	5.3	4.1	3.2	3.7
27	5.4	2.0	4.1	8.2	3.7	6.7	5.5	5.2	5.3	4.3	3.6	4.1
28	7.5	2.3	4.1	7.6	5.7	6.5	5.9	5.1	5.5	4.5	4.0	4.3
29	4.3	2.2	3.3	7.6	5.5	6.4	5.9	5.1	5.4	4.1	3.7	3.9
30	5.1	2.8	4.0	8.1	5.9	6.8	6.3	5.2	5.6	3.7	3.4	3.6
31	---	---	---	8.2	5.9	6.8	---	---	---	---	---	---
MONTH	---	---	---	8.6	.4	5.4	---	---	---	---	---	---

SAN JACINTO RIVER BASIN

08074150 COLE CREEK AT DEIHL ROAD, HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°51'04", long 95°29'16", Harris County, Hydrologic Unit 12040104, on downstream side of bridge at Deihl Road in northwest Houston and 1.8 mi upstream from mouth.

DRAINAGE AREA.--7.50 mi².

PERIOD OF RECORD.--Apr 1964 to Sep 1986 (daily mean discharge). Oct 1986 to Sep 1992 (annual maximum discharge). Oct 1992 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WDR TX-74-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is sea level, 1957 adjustment; unadjusted for land-surface subsidence. Radio telemeter at station.

REMARKS.--Records fair. No known regulation or diversions.

AVERAGE DISCHARGE.--22 years, (water years 1965-86), 8.08 ft³/s, (5,850 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,860 ft³/s Sep 11, 1998 (elevation, 80.86 ft); no flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 6	2015	1,130	77.08	Sep 11	1200	2,860	80.86

08074250 BRICKHOUSE GULLEY AT COSTA RICA STREET, HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°49'40", long 95°28'09", Harris County, Hydrologic Unit 12040104, at downstream side of bridge at Costa Rica Street in northwest Houston and 1.0 mi upstream from Whiteoak Bayou.

DRAINAGE AREA.--11.4 mi².

PERIOD OF RECORD.--Aug 1964 to Sep 1981 (daily mean discharge), Oct 1982 to Sep 1983 (peak discharges greater than base discharge or annual maximum), Oct 1983 to Sep 1992 (annual maximum), Oct 1992 to current year (peak discharges greater than base discharge).

Water-quality records.--Chemical and biochemical analyses: Oct 1981 to Sep 1982.

REVISED RECORDS.--WRD TX-74-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Low-water concrete control since Dec 9, 1970. Datum of gage is sea level; unadjusted for land-surface subsidence. Radio telemeter at station.

REMARKS.--Records good. Low flow is partially sustained by wastewater effluent. No known regulation or diversions.

AVERAGE DISCHARGE.--17 years (1965-1981), 14.0 ft³/s (10,140 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,580 ft³/s Mar 4, 1992, elevation, 71.26 ft; no flow at times.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 7	2100	2,930	64.58	Sep 11	Unkno	6,090	68.66
Jan 6	2030	4,510	67.36				

LOCATION.--Lat 29°46'30", long 95°23'49", Harris County, Hydrologic Unit 12040104, at downstream side of downstream bridge on Heights Boulevard in Houston, 560 ft downstream from Texas and New Orleans Railroad Co. bridge, 2.4 mi upstream from Little Whiteoak Bayou, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--86.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.35 ft below sea level, adjustment of 1973; unadjusted for land-surface subsidence. Prior to Jun 17, 1936, nonrecording gage, and Jun 17, 1936, to Apr 28, 1965, water-stage recorder at site 480 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records poor. No known regulation or diversions. Low flow is sustained by wastewater effluent.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1919, 51.5 ft Dec 9, 1935, prior to channel rectification, present site and datum (discharge, 14,750 ft³/s), furnished by the engineer for Harris County. The flood of May 31, 1929, reached a stage of 47.0 ft, prior to channel rectification, present site and datum; discharge, 9,360 ft³/s (computed on basis of current-meter measurement at stage 1.0 ft below crest, furnished by city of Houston).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,400 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 13	0915	5,770	29.38	Feb 22	0045	6,250	30.07
Dec 7	2145	6,480	30.41	Sep 11	1045	21,200	47.06
Jan 6	2230	10,500	35.64				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	42	53	36	42	53	49	27	29	39	43	62
2	41	39	41	36	57	47	52	26	28	44	42	45
3	41	39	1130	36	46	48	53	26	27	109	43	38
4	41	40	308	88	34	38	52	27	28	61	56	37
5	173	296	111	138	69	39	53	26	83	41	91	36
6	230	99	70	1950	55	39	53	26	187	38	59	44
7	356	38	873	2450	36	40	52	27	43	39	259	41
8	273	39	1260	236	35	41	53	24	31	35	102	140
9	769	49	180	71	36	37	44	30	29	34	55	97
10	186	280	62	52	599	36	41	25	28	33	49	454
11	1300	80	50	43	185	35	37	25	30	34	47	13200
12	651	705	44	86	49	37	33	25	29	35	49	2190
13	2180	383	42	239	41	40	32	25	28	34	42	963
14	548	137	41	73	39	282	33	26	29	269	57	325
15	201	e51	40	52	38	169	33	25	30	77	41	389
16	73	74	41	39	699	888	33	25	38	41	36	1370
17	49	45	41	36	327	220	35	25	34	40	46	275
18	44	130	41	35	66	66	197	25	31	121	450	146
19	41	94	42	34	350	53	63	24	33	58	237	67
20	39	46	330	33	55	43	32	25	33	49	129	57
21	38	43	890	352	309	40	31	25	30	40	326	59
22	38	44	94	224	2170	40	31	26	e34	41	712	53
23	478	42	504	39	194	40	30	26	35	46	363	51
24	193	40	439	34	72	47	32	28	64	55	363	61
25	56	40	75	33	55	42	34	26	35	38	82	51
26	43	41	56	39	1400	42	34	30	34	38	72	67
27	41	42	56	33	255	44	97	31	48	38	47	65
28	40	585	e53	34	72	47	49	29	745	40	42	51
29	41	624	48	35	---	50	30	29	126	38	42	46
30	135	126	44	39	---	51	29	28	46	38	42	45
31	76	---	36	34	---	55	---	29	---	39	139	---
TOTAL	8457	4333	7095	6659	7385	2749	1427	821	2025	1682	4163	20525
MEAN	273	144	229	215	264	88.7	47.6	26.5	67.5	54.3	134	684
MAX	2180	705	1260	2450	2170	888	197	31	745	269	712	13200
MIN	38	38	36	33	34	35	29	24	27	33	36	36
AC-FT	16770	8590	14070	13210	14650	5450	2830	1630	4020	3340	8260	40710

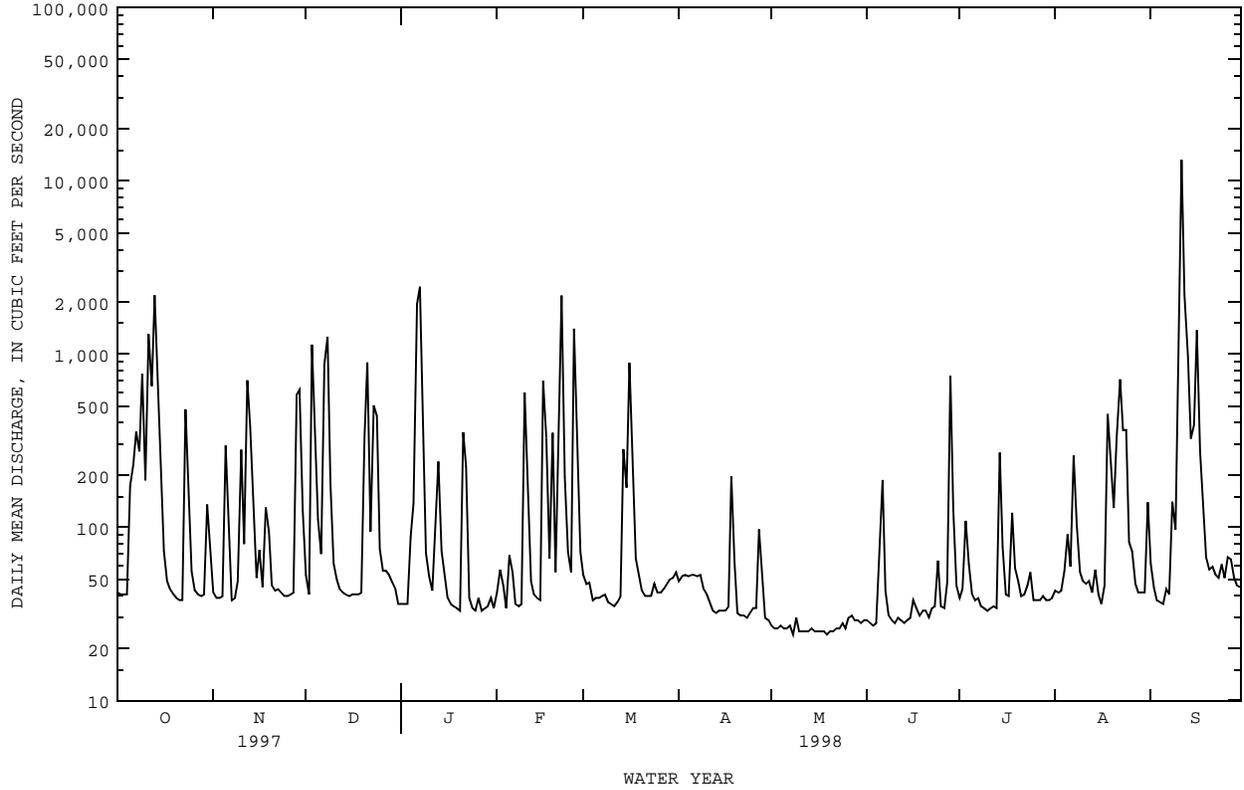
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1998, BY WATER YEAR (WY)

	90.4	106	99.9	116	117	95.2	93.3	126	118	77.7	75.3	101
MEAN	90.4	106	99.9	116	117	95.2	93.3	126	118	77.7	75.3	101
MAX	560	774	378	437	472	517	436	558	556	439	535	684
(WY)	1995	1947	1992	1944	1992	1992	1997	1989	1973	1942	1983	1998
MIN	.71	.93	2.22	1.70	5.12	1.10	1.35	.75	2.93	2.19	.61	1.07
(WY)	1949	1940	1949	1940	1951	1940	1939	1937	1954	1944	1940	1948

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1936 - 1998	
ANNUAL TOTAL	92039		67321		102	
ANNUAL MEAN	252		184		267	
HIGHEST ANNUAL MEAN					10.9	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	5800	Mar 12	13200	Sep 11	13200	Sep 11 1998
LOWEST DAILY MEAN	35	Jan 7	24	May 8	.20	Aug 7 1940
ANNUAL SEVEN-DAY MINIMUM	39	Sep 12	25	May 15	.26	Aug 12 1951
INSTANTANEOUS PEAK FLOW			21200	Sep 11	25100	Mar 4 1992
INSTANTANEOUS PEAK STAGE			47.06	Sep 11	50.43	Mar 4 1992
ANNUAL RUNOFF (AC-FT)	182600		133500		73600	
10 PERCENT EXCEEDS	670		351		205	
50 PERCENT EXCEEDS	57		44		28	
90 PERCENT EXCEEDS	39		29		2.2	

e Estimated



SAN JACINTO RIVER BASIN

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Oct 1968 to current year. Pesticide analyses: Feb 1969 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	BOD OXYGEN DEMAND, BIOCHEM, CARBON. 5 DAY (MG/L) (80082)	
FEB 02...	1155	53	810	7.8	15.0	20	8.8	11.0	110	3.1	2.8	
MAY 18...	1105	25	888	8.4	27.0	20	11	14.6	183	3.3	2.9	
AUG 11...	1055	43	760	8.1	31.0	21	2.3	10.8	145	3.0	2.0	
DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 02...	7700	8300	190	59	9.9	86	3	5.9	190	36	87	
MAY 18...	7000	600	180	55	11	108	4	7.6	230	45	110	
AUG 11...	2300	210	140	42	7.5	95	4	8.1	180	34	88	
DATE	TIME	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON-FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 02...	.48	16	447	10	5	5	5.74	.092	5.84	.173	.56	
MAY 18...	.53	18	518	4	10	.00	4.63	.159	4.78	.116	.64	
AUG 11...	.56	18	423	14	4	10	3.50	.205	3.70	.633	.88	
DATE	TIME	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (MG/L AS AS) (01000)	BARIUM, DIS-SOLVED (MG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (MG/L AS BE) (01010)	CADMIUM, DIS-SOLVED (MG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (MG/L AS CR) (01030)	COBALT, DIS-SOLVED (MG/L AS CO) (01035)
FEB 02...	.73	.992	.959	2.9	8.7	3	182	<1.0	<8.0	<14	<12	
MAY 18...	.76	1.11	1.09	3.3	8.5	7	179	<1.0	<8.0	<14	<12	
AUG 11...	1.5	1.06	1.05	3.2	7.7	8	148	<1.0	<8.0	<14	<12	
DATE	TIME	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
FEB 02...	<10	16	<100	16	26	<.1	<60	<40	<1	<4.0	355	
MAY 18...	<10	17	<100	16	13	<.1	<60	<40	1	<4.0	405	
AUG 11...	<10	21	<100	18	8.7	<.1	<60	<40	<1	<4.0	351	

08074500 WHITEOAK BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNPLTRD REC (UG/L) (39630)	CYAN- AZINE TOTAL (UG/L) (81757)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PRO- PAZINE TOTAL (UG/L) (39024)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)
FEB 02...	<10	51	<.100	.220	<.200	<.200	<.100	<.100	.160	<.100
MAY 18...	<10	27	<.100	.290	<.200	<.200	<.100	<.100	<.010	<.100
AUG 11...	<10	28	<.100	.130	<.200	<.200	<.100	<.100	<.100	<.100

SAN JACINTO RIVER BASIN

08074598 WHITEOAK BAYOU AT MAIN STREET, HOUSTON, TX

LOCATION.--Lat 29°45'59", long 95°21'30", Harris County, Hydrologic Unit 12040104, on right bank at Main street bridge, 3 miles downstream from station 08074500, and 700 ft upstream from Buffalo Bayou.

DRAINAGE AREA.--127 mi².

PERIOD OF RECORD.--Nov 1992 to current year.

GAGE.--Water-stage recorder and data logger. Datum of gage is sea level, 1978 adjustment, unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. No known regulation or diversions. Mostly tidal, affected by local runoff.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height 32.75 ft Sep 11, 1998 at 1200 hours; minimum, -1.57 ft Aug 14, 1994 at 2215 hours.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 32.75 ft, Sep 11; minimum gage height, -0.71 ft, Mar 9.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.23	3.31	4.42	2.54	4.02	2.04	3.89	2.16	5.06	2.91	---	---
2	4.72	3.75	3.46	1.88	4.54	3.26	3.94	2.18	4.26	2.59	---	---
3	4.84	3.73	3.44	1.30	9.28	3.14	4.00	2.72	3.52	2.12	---	---
4	4.87	3.96	3.78	1.91	3.87	1.80	4.33	3.33	4.16	2.02	---	---
5	4.97	3.75	5.56	3.07	3.78	2.72	4.75	3.16	4.23	2.25	---	---
6	4.77	3.55	4.27	1.55	4.21	2.88	12.33	3.44	3.58	1.38	---	---
7	5.63	4.20	3.33	1.67	22.12	3.10	12.33	2.57	3.12	1.10	---	---
8	6.28	4.56	3.76	2.40	11.92	3.32	3.83	1.88	3.69	1.64	---	---
9	9.27	4.71	4.10	2.76	4.48	3.34	5.11	3.29	4.16	2.24	1.60	- .71
10	6.03	4.37	4.22	2.44	4.11	2.70	5.33	3.91	6.80	3.74	3.04	.83
11	10.46	4.51	3.91	2.37	3.50	1.97	5.45	3.84	5.29	2.67	---	---
12	7.65	5.03	5.26	3.51	3.42	2.14	5.21	3.34	4.94	3.32	6.01	---
13	12.34	4.80	4.52	2.57	3.72	2.16	5.95	3.34	5.31	3.66	6.27	5.25
14	5.71	2.95	4.02	1.97	3.70	1.85	5.76	4.18	6.00	4.44	6.22	5.06
15	5.26	3.41	3.94	1.92	3.65	2.18	5.56	2.67	6.69	5.59	6.87	5.37
16	5.18	3.73	3.63	1.84	3.67	1.84	5.18	4.09	6.77	4.92	11.42	6.17
17	5.20	3.63	3.93	2.13	3.22	1.56	5.20	3.99	6.74	3.33	6.49	5.25
18	5.20	3.73	4.04	2.58	3.22	1.65	5.36	4.35	5.49	3.59	6.89	5.40
19	5.10	3.58	4.19	2.09	3.33	2.00	5.28	3.70	6.42	4.18	6.87	4.63
20	4.96	3.40	4.04	2.57	7.30	3.12	5.89	4.78	4.62	2.90	4.65	3.19
21	4.71	2.92	4.30	2.44	7.06	2.78	10.58	4.54	9.64	3.36	5.48	3.16
22	3.99	2.48	3.82	2.64	4.14	3.05	10.50	2.77	---	---	5.97	3.68
23	7.75	2.94	3.86	2.67	5.48	3.74	3.83	2.12	---	---	6.10	4.01
24	5.09	2.87	4.40	3.20	4.82	2.48	3.70	1.82	---	---	6.27	4.61
25	4.55	2.85	4.15	2.91	4.28	2.92	4.36	2.56	---	---	6.54	4.87
26	3.73	2.00	4.26	2.79	4.51	2.73	4.37	1.96	---	---	6.72	5.13
27	3.78	1.94	4.54	2.75	3.41	1.74	3.38	1.24	---	---	7.34	5.88
28	4.72	3.56	6.13	3.45	3.82	1.73	3.84	2.02	---	---	6.71	5.31
29	5.07	3.82	5.58	2.57	2.56	.81	3.96	2.36	---	---	7.28	5.43
30	4.92	3.56	4.17	1.78	3.16	1.69	3.86	2.04	---	---	8.31	5.97
31	4.69	3.02	---	---	3.37	1.96	4.87	2.92	---	---	7.97	5.36
MONTH	12.34	1.94	6.13	1.30	22.12	.81	12.33	1.24	---	---	---	---

08074598 WHITEOAK BAYOU AT MAIN STREET, HOUSTON, TX--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.66	4.59	6.59	4.76	6.26	4.47	6.23	4.79	5.64	4.19	7.16	5.15
2	6.93	4.97	6.64	4.53	6.61	5.14	6.55	4.99	5.67	4.19	7.62	5.85
3	6.34	4.63	6.57	5.05	6.73	5.19	7.63	5.60	6.75	4.10	7.29	5.72
4	5.97	3.82	6.33	4.69	6.88	5.44	6.85	4.97	6.96	5.18	7.44	5.53
5	6.59	4.57	6.63	5.29	6.82	4.98	6.28	4.87	6.39	4.71	7.79	5.73
6	7.27	5.56	6.68	5.63	5.99	4.41	6.09	4.46	6.26	4.45	7.27	5.58
7	6.70	5.17	6.45	5.45	7.02	4.51	6.05	4.10	6.71	4.52	8.40	5.74
8	6.54	5.01	6.93	5.07	7.68	5.66	6.09	4.28	6.67	4.37	8.25	6.72
9	5.56	4.03	7.17	5.46	7.48	5.83	6.11	4.28	6.25	4.57	8.91	6.89
10	5.64	3.98	5.79	4.59	7.21	5.31	5.88	4.01	6.17	4.54	11.69	8.43
11	6.57	4.23	6.57	4.29	7.48	5.81	5.71	3.75	5.99	4.50	32.75	11.61
12	7.45	5.61	7.15	5.20	6.88	4.76	5.76	3.98	6.09	4.80	19.41	7.18
13	7.17	5.72	7.19	5.37	6.45	4.46	5.69	3.89	5.98	4.32	7.35	4.93
14	6.59	4.81	7.50	5.73	6.11	4.39	6.60	4.08	6.06	4.13	7.00	4.75
15	6.97	5.18	7.18	5.76	6.07	4.52	5.83	4.17	6.33	4.20	6.41	4.57
16	6.96	5.19	6.70	4.72	6.45	4.30	5.71	4.29	6.25	4.20	7.63	4.76
17	6.27	4.47	6.57	4.47	7.08	5.64	5.55	4.09	6.70	4.48	5.75	4.45
18	6.56	4.54	6.35	4.35	6.88	5.60	5.77	3.53	6.57	4.48	5.78	4.53
19	6.16	4.43	6.49	4.62	6.76	5.00	5.97	3.82	6.27	4.63	5.94	4.55
20	6.67	4.57	6.67	4.95	6.49	4.76	5.85	3.93	7.07	4.55	5.47	4.61
21	5.95	4.23	6.60	5.44	6.44	4.51	6.01	4.11	7.94	5.07	5.53	4.12
22	5.53	4.01	6.53	5.24	6.35	4.61	6.04	4.20	8.87	6.72	5.48	4.07
23	5.80	3.96	6.72	4.95	6.49	4.17	6.28	4.10	7.53	5.98	4.91	3.73
24	6.10	4.55	6.61	4.86	6.42	4.48	6.10	4.28	6.97	5.63	4.92	4.08
25	6.99	5.25	6.78	4.81	7.19	4.43	6.25	4.39	6.75	5.45	5.17	4.04
26	7.47	5.09	6.96	4.88	6.96	5.13	6.02	4.32	6.78	5.53	5.50	4.15
27	6.85	5.09	7.23	4.66	7.60	5.13	5.96	4.41	6.19	5.01	5.20	3.41
28	6.17	4.14	6.88	4.52	11.83	5.21	6.10	4.60	5.99	4.69	5.05	4.01
29	7.06	4.11	6.72	4.60	6.80	4.83	6.13	4.96	5.93	4.78	5.53	3.69
30	6.96	5.09	6.62	4.47	6.53	5.14	5.81	4.61	6.52	4.64	4.72	3.68
31	---	---	6.52	4.45	---	---	5.65	4.47	6.79	4.65	---	---
MONTH	7.47	3.82	7.50	4.29	11.83	4.17	7.63	3.53	8.87	4.10	32.75	3.41

SAN JACINTO RIVER BASIN

08074610 BUFFALO BAYOU AT MCKEE STREET, HOUSTON, TX

LOCATION.--Lat 29°45'57", long 95°21'07", Harris County, Hydrologic Unit 12040104, on left bank at McKee Street bridge over Buffalo Bayou 0.8 mi downstream from station 08074598, 5.5 mi upstream from station 08074710.

DRAINAGE AREA.--469 mi².

WATER-ELEVATION RECORDS

PERIOD OF RECORD.--Feb 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level, 1978 adjustment, unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. Mostly tidal, affected by local runoff.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 26.3 ft Sep 11, 1998 at 1200 hours; minimum, -2.4 ft Jan 19, 1996 at 1400 hours and Mar 9, 1998 at 1145 hours.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 26.3 ft, Sep 11; minimum elevation, -2.4 ft, Mar 9.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.1	1.1	2.5	.6	1.9	-.1	2.0	.3	3.4	1.3	2.2	1.1
2	2.6	1.6	1.5	-.1	2.4	1.1	2.1	.4	2.6	.9	2.1	.8
3	2.8	1.6	1.5	-.7	5.5	.7	2.1	.9	1.9	.4	2.1	.3
4	2.8	1.8	2.0	.0	1.7	-.4	2.5	1.5	2.5	.3	2.8	1.2
5	2.9	1.7	3.4	1.2	1.5	.4	3.0	1.3	2.5	.5	2.6	.9
6	2.8	1.7	2.4	-.3	1.9	.6	10.9	1.6	1.9	-.4	2.5	.6
7	3.7	2.3	1.5	-.2	8.3	1.2	10.9	.6	1.4	-.7	2.9	1.1
8	4.2	2.6	1.9	.5	8.0	1.2	1.1	-.5	1.9	-.1	2.7	-1.6
9	6.0	2.6	2.2	.9	2.4	1.1	2.4	.3	2.4	.5	-.3	-2.4
10	4.0	2.5	2.3	.6	1.9	.4	2.6	1.0	3.4	1.7	1.2	-.9
11	7.1	2.6	2.0	.5	1.3	-.4	2.6	.9	1.9	-.5	2.1	.3
12	4.9	3.2	3.1	1.5	1.2	-.3	2.3	.4	1.9	.2	2.1	.7
13	8.5	3.0	2.6	.7	1.6	-.2	3.0	.3	2.2	.6	2.4	1.4
14	3.0	1.0	2.1	.1	1.5	-.6	2.9	1.2	3.0	1.4	2.4	1.2
15	3.3	1.4	2.0	-.3	1.6	-.1	2.6	-.3	3.6	2.6	3.0	1.5
16	3.2	1.6	1.7	-.2	1.6	-.1	2.0	.9	3.5	1.9	6.6	2.4
17	3.2	1.4	2.0	.2	1.3	-.4	2.0	.6	3.5	.4	2.6	1.4
18	3.2	1.6	2.1	.7	1.3	-.3	2.1	1.0	2.6	.5	2.9	1.4
19	3.1	1.4	2.3	.1	1.4	.1	2.1	.1	3.1	1.3	2.9	.8
20	3.0	1.2	2.1	.6	4.4	1.2	2.9	1.5	1.8	.0	.8	-.8
21	2.7	.8	2.4	.5	4.3	.8	8.8	1.6	7.3	.6	1.5	-.7
22	2.0	.6	1.9	.7	2.1	1.0	8.2	1.1	9.4	1.1	2.0	-.2
23	5.0	1.0	1.9	.7	3.0	1.8	2.2	.4	1.9	-.2	2.2	.1
24	3.2	1.0	2.4	1.2	2.3	.8	2.1	.1	2.5	.8	2.4	.7
25	2.7	1.0	2.2	1.0	2.3	.7	2.7	.8	3.3	1.5	2.6	1.0
26	1.9	.2	2.3	.9	2.4	.5	2.7	.2	5.2	1.8	2.8	1.2
27	1.8	.1	2.6	.8	1.2	-.8	1.7	-.5	2.7	.9	3.5	2.0
28	2.8	1.6	3.6	1.5	1.6	-.7	2.2	.3	3.1	1.4	2.8	1.5
29	3.2	1.8	3.1	.5	.3	-1.7	2.3	.6	---	---	3.4	1.6
30	3.0	1.6	2.2	-.3	.9	-.9	2.2	.4	---	---	4.4	2.1
31	2.8	1.0	---	---	1.2	-.4	3.2	1.3	---	---	4.1	1.5
MONTH	8.5	.1	3.6	-.7	8.3	-1.7	10.9	-.5	9.4	-.7	6.6	-2.4

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Feb 1992 to current year.
 WATER TEMPERATURE: Feb 1992 to current year.
 DISSOLVED OXYGEN: Feb 1992 to current year.

INSTRUMENTATION.-- Since Feb 1992, a three-parameter water-quality monitor continuously records specific conductance, water temperature, and dissolved oxygen at this station.

REMARKS.-- Interruption in the record was due to malfunctions of the instrumentation. Due to tidal effects, probe location, and channel morphology, the water-quality data collected at this location may not be representative of the entire flow through the cross-section.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,920 microsiemens, on Sep 5, 1998; minimum, 30 microsiemens, May 25, 1997.
 WATER TEMPERATURE: Maximum, 34.2°C, on Aug 2, 1998; minimum, 5.5°C, on Jan 13-15, 1997.
 DISSOLVED OXYGEN: Maximum, 15.5 mg/L, May 2, 1995; minimum, 0.0 mg/L, Jul 2, 4 1998.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,920 microsiemens, Sep 5; minimum, 60 microsiemens, Jun 28.
 WATER TEMPERATURE: Maximum, 34.2°C, Aug 2; minimum, 9.6°C, Dec 16.
 DISSOLVED OXYGEN: Maximum, 14.7 mg/L, May 22; minimum, 0.0 mg/L, Jul 2, 4.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	201	125	169	260	198	232	260	180	225	337	185	247
2	201	124	164	306	226	265	235	159	195	378	201	280
3	206	144	176	343	175	272	229	124	163	---	---	---
4	246	146	192	367	208	273	223	152	194	780	236	626
5	376	175	254	380	211	288	217	152	177	647	449	533
6	369	195	272	415	224	322	169	137	155	---	---	---
7	336	180	257	628	221	367	353	157	252	---	---	---
8	338	158	217	725	347	579	---	---	---	252	161	211
9	242	113	173	779	594	673	---	---	---	243	150	178
10	322	146	224	771	223	415	---	---	---	---	---	---
11	328	126	223	592	255	415	---	---	---	---	---	---
12	316	148	209	519	194	289	---	---	---	---	---	---
13	347	107	182	390	217	306	---	---	---	---	---	---
14	233	116	178	500	252	377	---	---	---	617	317	431
15	237	145	179	494	257	320	---	---	---	820	342	632
16	189	117	162	337	254	302	287	186	243	828	172	347
17	181	103	150	497	305	397	470	272	393	---	---	---
18	171	122	144	622	397	472	620	470	539	227	169	199
19	162	118	143	601	262	457	689	376	604	276	178	234
20	169	118	144	678	302	522	738	152	593	360	220	286
21	196	119	155	770	599	676	314	151	221	---	---	---
22	233	149	198	829	671	730	395	160	257	358	153	221
23	251	123	188	832	688	763	342	132	215	539	303	399
24	320	143	213	826	664	764	---	---	---	503	384	437
25	376	183	235	905	632	789	---	---	---	532	397	464
26	299	201	249	894	734	817	---	---	---	---	---	---
27	294	160	212	958	675	823	196	140	163	765	247	604
28	222	154	181	941	149	667	185	138	166	890	297	745
29	239	140	187	345	133	272	195	147	173	1010	692	826
30	311	148	279	262	181	229	186	143	165	1080	694	837
31	263	199	230	---	---	---	215	155	184	994	648	766
MONTH	376	103	198	958	133	469	---	---	---	---	---	---

08074610 BUFFALO BAYOU AT MCKEE STREET, HOUSTON, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1030	665	870	259	186	223	744	583	669	975	683	827
2	1040	655	861	260	191	221	825	622	730	972	618	819
3	889	345	752	261	201	226	883	682	786	945	708	834
4	859	620	737	308	218	264	968	748	837	976	709	844
5	914	493	774	427	244	333	994	787	880	---	---	---
6	816	241	691	427	260	334	992	773	875	---	---	---
7	811	577	699	423	258	340	1010	735	883	1080	785	894
8	855	622	751	494	342	426	986	778	889	1040	754	886
9	936	663	806	---	---	---	1010	791	894	988	641	828
10	1040	223	600	---	---	---	998	781	896	810	585	700
11	352	169	268	---	---	---	1000	801	896	854	655	752
12	416	258	321	---	---	---	982	812	891	844	676	771
13	424	171	304	---	---	---	980	760	890	911	716	808
14	619	189	397	854	541	743	1000	763	887	978	752	846
15	683	218	533	607	522	551	997	800	893	957	717	848
16	746	181	398	569	176	364	1050	778	888	995	764	867
17	333	163	247	389	283	318	1060	793	889	1010	762	886
18	361	212	258	478	274	321	951	476	755	994	731	862
19	287	167	226	440	315	370	672	462	557	977	681	844
20	349	218	275	---	---	---	642	471	559	1000	698	855
21	410	217	330	665	407	545	753	484	609	996	697	834
22	---	---	---	803	586	701	789	585	696	997	430	788
23	314	156	242	880	670	764	842	671	764	---	---	---
24	281	146	195	933	723	806	881	631	788	---	---	---
25	250	163	197	955	751	845	888	715	810	---	---	---
26	368	177	229	998	721	860	976	660	834	---	---	---
27	296	188	241	966	761	876	1050	654	842	1020	775	878
28	275	182	227	1020	739	896	838	465	622	1000	749	879
29	---	---	---	994	798	904	831	651	741	988	741	868
30	---	---	---	1040	796	903	924	676	808	983	769	881
31	---	---	---	996	563	772	---	---	---	1050	789	889
MONTH	---	---	---	---	---	---	1060	462	799	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	962	762	852	670	494	566	1010	731	840	672	375	512
2	976	742	857	717	561	626	951	698	816	667	402	519
3	945	770	850	718	536	627	1160	775	944	1110	525	734
4	957	735	849	648	391	490	1220	772	973	1860	686	1020
5	925	782	862	549	425	492	978	590	826	2920	932	1470
6	827	406	526	704	493	576	618	299	444	2850	652	1400
7	518	311	419	738	569	658	755	391	605	971	526	685
8	724	436	598	741	588	665	574	396	489	1240	249	598
9	664	513	580	770	606	695	601	418	518	400	242	340
10	735	570	655	804	639	722	636	471	563	438	203	360
11	810	613	702	798	621	725	683	534	619	---	---	---
12	828	626	758	836	671	758	960	577	710	---	---	---
13	885	729	800	870	678	762	1710	740	927	---	---	---
14	893	715	810	854	184	648	2760	610	1260	---	---	---
15	919	725	819	627	178	462	979	416	719	---	---	---
16	---	---	---	501	255	375	569	380	468	219	165	199
17	---	---	---	698	398	517	539	310	436	335	219	276
18	---	---	---	680	375	539	592	205	429	347	126	190
19	---	---	---	515	324	427	321	205	265	177	139	153
20	867	652	756	629	428	515	452	291	362	177	130	155
21	872	701	769	649	485	563	452	253	350	176	125	152
22	875	662	771	675	471	594	334	192	262	183	120	147
23	919	685	779	683	533	629	312	209	257	174	120	144
24	891	660	781	724	535	641	340	200	259	177	125	147
25	802	598	725	763	524	620	421	242	322	248	137	185
26	829	609	730	796	582	699	396	293	352	397	199	264
27	818	569	717	865	654	766	499	356	415	266	172	207
28	757	60	428	1040	721	839	582	345	448	---	---	---
29	393	137	289	1100	740	890	601	413	501	---	---	---
30	596	286	474	1040	773	869	892	518	697	---	---	---
31	---	---	---	952	715	831	1860	487	906	---	---	---
MONTH	---	---	---	1100	178	638	2760	192	580	---	---	---

SAN JACINTO RIVER BASIN

08074610 BUFFALO BAYOU AT MCKEE STREET, HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	25.8	25.1	25.4	21.0	19.6	20.3	17.7	16.0	16.6	12.2	10.6	11.3
2	25.9	25.4	25.6	20.4	19.5	20.1	16.0	15.3	15.5	14.2	12.2	13.3
3	25.6	25.2	25.4	19.5	18.6	19.0	16.6	15.3	16.1	15.9	14.2	15.3
4	25.4	24.9	25.2	18.9	17.9	18.4	16.1	14.5	15.3	18.7	15.8	17.2
5	26.6	24.7	25.4	20.5	18.7	19.5	14.5	13.6	14.1	20.0	18.4	19.1
6	26.3	25.4	25.8	20.3	19.6	19.9	13.6	12.6	13.1	20.3	17.8	19.6
7	26.2	24.8	25.4	19.6	17.8	18.6	15.4	12.5	13.0	17.9	15.9	17.2
8	25.4	24.6	24.9	17.9	17.3	17.6	---	---	---	15.9	13.9	14.7
9	25.3	24.4	24.9	18.4	17.3	17.7	---	---	---	14.1	13.5	13.8
10	25.6	24.7	25.0	18.3	16.9	17.6	---	---	---	14.1	13.7	13.9
11	25.7	24.8	25.4	16.9	16.4	16.5	---	---	---	14.8	13.9	14.2
12	26.5	25.0	25.5	16.6	15.8	16.2	---	---	---	19.2	14.8	16.9
13	26.2	22.0	24.0	17.4	16.2	16.7	---	---	---	19.2	18.2	18.5
14	22.0	21.1	21.6	17.1	16.3	16.5	---	---	---	18.2	17.6	17.7
15	22.0	20.0	21.4	16.7	14.1	15.3	---	---	---	17.8	15.7	16.6
16	21.6	21.1	21.3	14.1	12.4	13.2	11.6	9.6	10.6	16.2	13.8	14.5
17	21.1	20.6	20.8	12.4	11.8	12.0	12.4	11.4	12.0	14.4	13.9	14.2
18	20.6	20.3	20.5	13.0	12.0	12.5	13.3	12.4	13.0	14.9	14.1	14.5
19	20.8	20.2	20.5	13.7	12.9	13.3	14.8	13.3	14.1	15.2	14.5	14.9
20	20.9	20.4	20.6	15.1	13.7	14.4	18.4	14.7	16.3	15.0	14.3	14.7
21	21.0	20.5	20.7	16.9	15.1	16.1	18.7	17.1	17.9	19.2	14.8	16.0
22	21.0	20.5	20.8	16.9	16.2	16.4	17.1	16.2	16.5	18.9	17.5	18.4
23	22.3	20.3	20.9	16.7	16.2	16.4	16.6	16.1	16.3	17.5	16.3	16.7
24	23.9	21.9	22.5	17.1	16.0	16.4	---	---	---	16.7	14.3	15.1
25	23.8	21.9	22.6	17.8	16.3	17.0	---	---	---	15.1	14.2	14.5
26	22.3	19.5	20.9	18.7	17.4	18.1	---	---	---	15.8	14.2	15.2
27	19.5	18.6	19.0	19.8	18.6	19.4	13.4	12.2	12.8	15.8	15.1	15.4
28	18.8	18.1	18.5	21.6	19.3	20.2	12.2	11.4	11.8	15.7	15.1	15.5
29	18.1	17.9	17.9	20.2	19.0	19.6	11.4	10.6	11.0	16.4	15.1	16.0
30	20.5	17.8	18.5	19.2	17.6	18.1	10.8	10.4	10.5	17.7	16.0	17.2
31	19.7	18.9	19.3	---	---	---	10.9	10.3	10.6	18.7	17.6	18.0
MONTH	26.6	17.8	22.5	21.6	11.8	17.1	---	---	---	20.3	10.6	15.8
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	17.9	17.5	17.7	16.6	15.8	16.2	23.9	22.4	22.9	25.4	22.8	23.6
2	17.5	16.3	17.0	15.9	15.4	15.6	22.5	21.3	22.0	25.7	23.7	24.3
3	16.7	15.7	16.1	15.6	15.1	15.3	22.4	21.2	21.5	26.1	24.3	25.0
4	16.9	16.1	16.4	15.6	14.9	15.3	22.9	21.5	22.0	27.3	25.1	26.1
5	16.3	14.9	15.7	18.5	15.5	16.7	23.3	21.2	21.9	26.4	25.8	26.0
6	14.9	14.1	14.4	18.6	17.6	18.1	22.4	21.2	21.8	27.0	25.3	25.5
7	15.1	13.9	14.4	18.8	17.9	18.2	23.2	21.0	21.7	27.5	25.3	25.9
8	14.9	13.9	14.6	19.0	16.5	17.8	24.5	21.9	23.3	27.9	26.1	26.7
9	16.5	14.2	15.7	---	---	---	24.5	22.9	23.6	27.0	26.4	26.7
10	18.2	16.2	17.5	---	---	---	24.3	22.6	23.1	27.8	26.5	26.9
11	17.5	16.2	16.9	---	---	---	23.8	22.3	22.9	28.0	25.9	26.6
12	17.2	15.3	15.9	---	---	---	22.6	21.8	22.2	27.8	26.2	26.7
13	16.6	15.9	16.1	---	---	---	22.1	21.5	21.7	26.9	26.2	26.5
14	16.6	16.0	16.4	16.6	14.0	15.2	22.9	21.5	22.0	26.8	26.0	26.4
15	16.2	15.4	15.8	17.3	16.2	16.5	23.3	22.3	22.9	27.3	26.1	26.5
16	15.7	12.9	14.8	17.9	17.1	17.5	24.5	23.0	23.4	28.5	26.5	27.1
17	14.8	13.0	13.8	20.3	17.4	18.3	23.9	22.2	23.5	28.9	27.1	27.7
18	14.5	13.3	14.0	19.6	18.3	19.2	22.2	18.5	20.1	29.7	27.5	28.0
19	16.0	14.1	15.0	20.7	19.4	20.0	20.7	18.1	18.8	29.4	27.4	27.9
20	16.5	14.9	15.7	20.6	17.6	18.7	21.8	19.8	20.7	29.0	27.2	27.8
21	16.3	14.7	15.5	19.1	17.5	18.2	22.2	20.6	21.4	29.7	27.4	28.1
22	14.7	13.7	14.0	18.8	17.5	18.0	23.0	21.1	21.6	29.8	27.5	28.2
23	16.5	13.7	14.7	20.2	17.7	18.7	23.5	21.0	21.8	28.7	27.5	28.1
24	15.8	14.5	15.2	20.7	18.0	19.5	23.9	21.5	22.6	---	---	---
25	17.3	15.6	16.3	21.3	19.1	20.5	23.4	22.0	22.6	---	---	---
26	18.1	16.6	17.5	21.7	20.0	21.1	22.7	22.3	22.5	28.6	27.4	27.7
27	18.0	16.9	17.5	22.0	20.8	21.4	23.2	22.1	22.5	28.6	27.6	27.9
28	17.5	16.6	17.0	23.1	21.3	22.2	23.9	22.2	22.5	29.7	27.8	28.3
29	---	---	---	23.9	22.1	23.1	23.9	22.5	23.2	30.5	28.4	28.9
30	---	---	---	23.9	23.2	23.6	24.7	22.5	23.0	30.7	29.0	29.5
31	---	---	---	23.8	22.5	23.1	---	---	---	31.5	29.6	30.2
MONTH	18.2	12.9	15.8	---	---	---	24.7	18.1	22.2	---	---	---

08074610 BUFFALO BAYOU AT MCKEE STREET, HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	31.6	30.0	30.6	32.0	30.0	30.5	33.5	31.7	32.4	31.0	29.8	30.3
2	32.3	30.0	30.7	32.2	30.2	30.8	34.2	32.2	32.9	31.1	29.8	30.3
3	31.2	30.0	30.4	30.9	29.3	30.2	33.9	32.6	33.0	31.6	30.7	31.0
4	30.8	30.0	30.3	29.3	28.5	28.9	33.1	32.2	32.6	31.7	30.9	31.3
5	30.4	29.4	29.9	31.0	29.3	29.9	32.6	31.6	32.2	31.9	30.8	31.3
6	29.5	26.6	27.1	32.2	29.9	30.6	31.7	29.2	29.7	31.1	30.1	30.6
7	27.2	26.0	26.4	33.0	30.5	31.2	30.2	28.4	29.5	30.1	29.3	29.6
8	28.2	26.5	27.3	32.5	30.9	31.4	29.6	28.1	28.6	29.7	28.5	29.1
9	29.2	27.6	28.0	32.8	30.9	31.5	31.0	29.5	29.9	28.8	28.3	28.5
10	29.7	28.2	28.8	33.3	31.0	31.5	32.1	30.1	30.7	28.5	25.5	27.7
11	30.1	28.8	29.4	33.2	31.0	31.6	32.3	30.7	31.3	---	---	---
12	30.7	29.4	29.8	32.8	31.0	31.5	32.6	31.3	31.7	---	---	---
13	31.3	29.6	30.0	32.0	30.9	31.4	32.9	31.5	31.9	---	---	---
14	31.9	29.7	30.5	31.8	28.6	30.5	31.7	30.7	31.2	---	---	---
15	32.0	30.0	30.6	30.1	28.1	29.1	30.9	29.8	30.2	---	---	---
16	32.4	30.4	30.8	31.4	29.6	30.1	30.9	29.9	30.2	27.1	26.4	26.7
17	---	---	---	31.7	30.0	30.8	30.6	29.6	30.1	28.2	26.3	26.9
18	---	---	---	32.2	29.3	30.7	31.0	27.9	29.5	28.0	26.2	26.8
19	---	---	---	31.8	30.4	31.0	30.1	27.4	28.4	27.0	26.4	26.8
20	32.4	30.6	31.2	31.5	30.2	30.5	31.2	29.8	30.0	27.4	26.7	27.0
21	32.6	30.5	31.1	31.5	30.2	30.6	30.0	28.9	29.4	27.8	27.0	27.4
22	31.6	30.5	30.9	32.0	30.3	30.7	28.9	27.7	28.1	27.9	27.5	27.7
23	31.5	30.0	30.5	32.6	30.7	31.1	30.2	27.5	28.2	28.2	27.5	27.8
24	31.2	30.0	30.3	33.0	31.0	31.5	31.1	28.4	29.3	28.0	27.6	27.8
25	31.6	30.3	30.6	32.1	31.2	31.5	31.0	29.4	29.8	28.1	27.5	27.8
26	31.4	30.2	30.5	32.5	31.3	31.7	31.4	29.5	30.4	28.0	27.5	27.8
27	31.0	30.3	30.5	32.9	31.4	32.0	31.4	30.5	30.9	28.3	27.1	27.7
28	30.7	26.9	28.9	32.6	31.5	31.9	31.9	31.1	31.3	---	---	---
29	29.4	27.6	28.2	32.9	31.3	31.8	32.5	31.2	31.7	---	---	---
30	30.9	29.4	29.9	32.8	31.1	31.7	32.3	31.4	32.0	---	---	---
31	---	---	---	33.3	31.2	31.9	31.4	30.3	30.8	---	---	---
MONTH	---	---	---	33.3	28.1	31.0	34.2	27.4	30.6	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.7	6.7	7.3	8.6	6.5	7.3	8.3	6.8	7.6	7.2	3.5	4.7
2	7.2	5.9	6.6	8.5	7.0	7.7	8.9	7.6	8.2	4.4	3.1	3.8
3	6.4	4.7	5.7	8.1	7.0	7.7	9.4	7.7	8.4	4.3	3.6	4.0
4	6.1	5.5	5.8	8.3	4.8	6.6	9.0	7.1	8.0	4.5	3.8	4.2
5	6.3	4.7	5.5	7.7	5.4	6.4	8.9	7.7	8.2	7.3	2.9	5.3
6	5.9	4.3	4.9	6.7	4.8	5.8	8.5	7.8	8.1	9.2	6.4	7.3
7	6.5	5.2	5.7	7.0	5.2	6.1	---	---	---	9.1	7.3	8.1
8	7.2	5.8	6.4	7.7	5.1	6.5	---	---	---	9.3	7.6	8.2
9	7.7	6.2	7.0	7.9	5.9	6.8	---	---	---	9.4	8.3	8.8
10	7.3	5.6	6.4	8.7	6.1	7.0	---	---	---	9.3	8.4	8.8
11	8.0	4.4	6.4	7.4	5.7	6.5	---	---	---	9.4	8.5	8.8
12	7.1	6.0	6.5	9.0	7.1	8.0	---	---	---	9.3	7.0	7.9
13	10.0	5.6	7.7	8.8	7.1	7.9	---	---	---	8.5	6.5	7.5
14	7.8	7.0	7.4	8.1	4.8	6.7	---	---	---	8.3	6.9	7.4
15	7.8	7.1	7.5	7.6	5.9	6.8	---	---	---	8.4	6.9	7.6
16	7.9	7.3	7.5	7.6	5.9	6.6	9.2	7.2	7.8	9.8	7.4	9.0
17	8.8	7.5	8.0	6.9	4.9	5.8	---	---	---	9.8	9.1	9.5
18	9.6	8.1	8.5	7.7	4.8	6.2	---	---	---	9.7	8.7	9.3
19	9.0	8.0	8.4	10.8	4.1	6.8	8.8	5.8	7.8	9.5	8.6	9.0
20	8.9	7.8	8.3	8.0	4.2	6.4	8.5	6.7	7.6	9.5	8.4	8.9
21	8.8	7.2	8.1	8.6	5.9	7.5	8.4	7.0	7.8	9.4	7.1	8.4
22	8.7	7.1	8.0	9.0	5.5	7.7	8.0	6.4	7.1	9.2	7.6	8.4
23	8.8	6.1	7.4	8.6	6.4	7.7	8.4	7.2	7.8	8.1	6.3	7.3
24	7.1	5.1	6.1	8.8	5.9	7.5	---	---	---	9.0	7.5	8.5
25	8.1	5.4	7.0	9.3	6.4	7.5	---	---	---	9.0	7.1	8.2
26	8.5	6.9	7.6	8.6	6.7	7.4	---	---	---	9.0	7.3	8.2
27	8.6	7.4	8.1	8.4	6.8	7.4	7.9	5.6	6.5	8.4	6.0	7.4
28	8.7	7.5	8.0	8.8	6.6	7.6	8.1	6.6	7.4	8.1	5.2	6.7
29	9.0	7.4	8.0	8.5	5.8	7.0	8.4	6.4	7.3	8.4	4.5	6.3
30	9.6	4.9	7.3	7.6	6.7	7.1	8.1	6.2	7.1	8.6	3.5	6.3
31	7.5	4.7	6.0	---	---	---	10.3	5.7	6.9	7.6	2.6	4.2
MONTH	10.0	4.3	7.1	10.8	4.1	7.0	---	---	---	9.8	2.6	7.4

SAN JACINTO RIVER BASIN

08074610 BUFFALO BAYOU AT MCKEE STREET, HOUSTON, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.7	2.7	5.3	7.5	4.7	6.4	10.2	4.6	8.4	11.4	1.6	7.0
2	8.2	4.7	6.8	7.7	5.0	6.6	11.7	6.4	9.1	10.9	4.2	7.9
3	8.0	5.3	6.7	9.0	4.7	7.7	11.2	6.3	7.7	11.6	2.9	7.5
4	9.4	5.1	7.6	8.8	5.5	8.2	11.2	6.7	9.3	13.3	1.8	8.0
5	9.8	6.2	8.0	6.5	---	---	9.8	5.5	7.2	---	---	---
6	8.8	6.6	7.8	8.2	---	---	10.3	4.0	7.6	---	---	---
7	8.6	6.4	7.6	8.1	---	---	7.9	4.6	6.2	11.3	4.1	6.4
8	10.4	7.6	8.7	7.9	---	---	8.6	4.8	6.1	11.0	4.1	7.3
9	10.3	6.2	8.2	---	---	---	7.7	4.3	5.9	6.9	4.4	5.7
10	9.0	7.0	8.2	---	---	---	8.1	4.4	6.4	10.2	4.7	6.6
11	8.5	7.5	7.9	---	---	---	7.6	4.5	6.4	11.5	4.8	7.1
12	8.6	7.3	7.9	---	---	---	9.1	4.9	6.8	10.1	4.0	6.4
13	8.1	7.1	7.6	---	---	---	8.1	5.5	6.9	8.1	3.4	6.0
14	8.5	6.0	7.3	---	---	---	7.5	4.4	5.7	7.0	2.6	5.1
15	8.2	6.1	7.3	---	---	---	7.0	4.1	5.8	8.0	2.5	5.1
16	10.0	7.0	8.5	---	---	---	7.7	4.2	5.5	11.5	4.2	7.2
17	9.6	8.0	8.8	---	---	---	7.0	4.2	5.8	12.0	6.2	7.7
18	9.5	8.2	8.7	---	---	---	6.5	3.9	5.5	12.4	5.6	8.4
19	9.2	7.4	8.4	---	---	---	5.7	2.0	4.4	14.1	7.0	9.5
20	8.4	7.1	7.7	---	---	---	5.3	.9	2.7	13.8	6.7	8.6
21	9.6	6.3	7.1	7.3	5.5	6.3	4.5	2.0	3.4	13.3	5.6	8.3
22	10.0	8.0	9.0	8.1	5.1	6.3	6.8	3.3	4.7	14.7	4.5	8.6
23	8.7	6.8	7.9	9.2	4.9	6.6	8.5	4.5	6.2	---	---	---
24	8.8	7.3	8.3	9.5	4.9	7.4	9.7	5.1	7.1	---	---	---
25	8.1	6.8	7.5	9.3	4.9	7.3	8.5	4.7	6.4	---	---	---
26	8.3	4.3	6.5	8.3	4.7	6.3	8.8	5.1	6.6	---	---	---
27	6.0	2.6	4.8	7.1	4.0	5.1	7.4	3.9	5.7	7.6	3.7	5.5
28	6.7	3.8	5.0	7.2	4.0	5.9	6.5	1.0	2.6	11.3	3.7	6.5
29	---	---	---	7.2	3.5	5.9	5.6	1.8	3.9	11.9	4.5	6.7
30	---	---	---	6.4	4.1	5.3	9.0	1.2	5.0	9.6	4.1	5.8
31	---	---	---	6.3	3.3	4.5	---	---	---	7.2	3.5	5.0
MONTH	10.4	2.6	7.5	---	---	---	11.7	.9	6.0	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.9	3.5	5.8	6.6	.4	3.3	8.6	5.5	6.5	7.5	3.9	5.4
2	9.0	5.1	6.6	7.6	.0	2.5	8.0	5.0	6.2	6.6	4.4	5.4
3	7.6	4.4	5.7	5.6	.3	3.4	7.6	4.0	5.4	7.3	4.1	5.8
4	6.0	3.2	4.3	3.4	.0	1.2	7.3	4.3	5.6	7.3	4.1	5.8
5	3.9	1.9	2.9	4.1	1.2	2.6	7.2	5.3	6.4	8.8	5.7	6.9
6	3.8	.8	1.4	6.3	.4	2.5	5.5	.9	1.7	8.2	5.8	6.8
7	1.1	.7	.8	6.4	.3	3.2	6.9	1.4	3.5	6.3	3.4	4.3
8	3.7	1.0	2.1	9.1	1.4	4.6	4.9	3.4	4.1	7.9	3.4	5.1
9	3.7	1.5	2.4	8.9	1.2	4.5	5.3	4.3	4.7	6.7	3.9	5.0
10	4.3	.7	2.1	10.2	1.3	5.0	6.2	3.6	4.9	8.0	4.0	5.4
11	5.0	.7	2.7	9.7	2.7	5.7	6.4	3.6	5.0	---	---	---
12	6.2	.8	3.5	9.5	3.9	6.2	8.0	3.5	5.1	---	---	---
13	8.6	.6	3.9	9.0	2.7	6.0	9.4	4.0	6.3	---	---	---
14	9.4	1.7	5.3	9.0	2.2	5.3	7.1	4.7	5.9	---	---	---
15	9.1	2.8	4.7	4.6	.6	1.6	6.8	5.3	5.8	---	---	---
16	---	---	---	1.3	.6	.8	6.6	4.9	5.9	6.5	5.1	6.1
17	---	---	---	5.3	.8	2.7	7.9	5.7	6.7	6.3	4.7	5.8
18	---	---	---	7.0	2.4	4.5	7.5	2.8	5.6	5.4	4.6	5.1
19	---	---	---	4.7	1.8	3.2	6.4	5.1	5.5	5.4	5.0	5.2
20	8.3	2.9	5.1	5.9	3.1	4.4	7.9	4.0	5.1	5.3	4.8	5.0
21	8.9	3.5	5.4	5.9	3.9	4.9	6.1	2.9	4.7	5.1	4.6	4.8
22	8.1	3.6	5.4	7.6	3.1	5.0	7.7	5.4	6.7	4.7	3.9	4.4
23	7.5	3.3	4.9	9.3	3.6	5.8	7.0	2.5	5.6	4.5	4.1	4.3
24	7.3	3.6	5.4	9.8	3.8	6.1	6.5	2.2	5.3	4.5	3.8	4.2
25	6.4	1.5	4.1	7.4	4.4	5.7	5.9	2.2	4.7	4.4	2.6	3.2
26	6.8	1.3	4.1	9.1	3.3	6.2	6.5	4.0	5.5	4.6	2.5	3.3
27	5.8	1.5	3.9	11.5	5.8	7.8	---	---	---	4.3	3.2	3.7
28	7.2	.1	3.5	8.9	5.3	7.0	---	---	---	---	---	---
29	5.1	1.7	3.3	9.2	3.7	6.3	7.5	5.5	6.3	---	---	---
30	4.3	1.0	2.7	9.6	3.8	6.2	7.7	5.7	6.3	---	---	---
31	---	---	---	10.8	5.6	7.1	7.5	5.0	6.4	---	---	---
MONTH	---	---	---	11.5	.0	4.6	---	---	---	---	---	---

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX

LOCATION.--Lat 29°44'57", long 95°17'27", Harris County, Hydrologic Unit 12040104, on left bank at Wharf No. 5 at end of private road, 1.8 mi upstream from Brays Bayou and 4.9 mi east of downtown Houston.

DRAINAGE AREA.--476 mi².

WATER-ELEVATION RECORDS

PERIOD OF RECORD.--Jan 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level, 1978 adjustment, unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records fair. Only very large storms or hurricane surge produces elevations above normal tidal fluctuations.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 9.2 ft Sep 11, 1998; minimum, -3.1 ft Mar 6, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 9.2 ft, Sep 11; minimum elevation, -2.5 ft, Dec 29.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1.5	.4	.9	2.1	.2	1.1	1.5	-.4	.6	1.7	-.1	.8
2	2.0	.9	1.4	1.1	-.5	.5	2.0	.7	---	1.7	.1	1.1
3	2.1	.8	1.5	1.1	-1.0	.0	3.1	-.1	1.5	1.8	.6	1.2
4	2.2	1.2	1.7	1.6	-.4	.5	1.3	-.9	.2	2.2	1.2	1.7
5	2.4	1.3	1.8	2.8	.9	1.9	.9	-.4	.4	2.5	1.0	1.5
6	2.4	1.4	2.0	2.0	-.6	.4	1.2	-.2	.6	3.2	1.3	2.0
7	3.1	1.9	2.5	1.0	-.4	.4	3.1	.9	1.7	2.5	-.3	.7
8	3.6	2.1	2.9	1.6	.3	1.0	3.3	.7	1.8	.6	-1.0	-.3
9	4.0	2.0	3.0	1.8	.7	1.3	1.7	.5	---	1.8	-.4	---
10	3.5	2.1	3.0	2.0	.2	1.2	1.4	-.3	.6	1.9	.3	1.3
11	4.2	2.3	3.6	1.6	.2	.8	.8	-1.1	-.1	2.1	.1	1.2
12	4.4	2.7	3.8	2.4	1.1	1.8	.6	-1.1	-.2	1.9	.0	1.1
13	4.1	1.0	2.6	2.2	.3	1.3	1.0	-1.0	.0	2.6	.0	1.1
14	2.2	.6	1.3	1.7	-.2	.9	.9	-1.4	-.2	2.4	.9	1.8
15	2.7	.9	1.8	1.6	-.9	.3	1.0	-.9	.2	2.3	-.5	.6
16	2.6	.9	1.8	1.4	-.7	.2	1.1	-.5	.4	1.4	.2	.6
17	2.5	.6	1.6	1.7	-.1	1.1	1.0	-.6	.3	1.4	-.1	.5
18	2.5	.8	1.7	1.7	.4	1.3	1.0	-.5	.3	1.4	.4	.7
19	2.4	.7	1.6	1.9	-.1	1.0	1.1	-.2	.6	1.5	-.7	.3
20	2.3	.5	1.5	1.8	.4	1.2	2.6	.9	1.3	2.4	1.1	---
21	2.0	.2	1.3	2.0	.1	1.1	2.5	.5	1.3	4.4	1.3	2.2
22	1.6	.2	.9	1.5	.4	.8	1.7	.6	1.1	4.4	.7	---
23	3.1	.7	2.1	1.5	.5	1.0	2.3	1.2	1.8	1.8	.1	1.0
24	2.9	.6	1.7	2.1	1.0	---	1.6	.1	.9	1.7	-.3	.8
25	2.3	.6	1.7	1.9	.7	---	1.6	.0	.9	2.3	.5	1.4
26	1.4	-.2	.6	1.9	.6	---	1.8	-.1	.9	2.4	.0	1.3
27	1.4	-.2	.5	2.2	.5	1.3	.6	-1.4	-.3	1.4	-.8	---
28	2.3	1.2	1.6	2.6	1.2	2.0	1.1	-1.4	.1	1.9	.0	1.0
29	2.7	1.3	2.0	2.2	.1	1.2	-.3	-2.5	-1.7	2.1	.4	1.3
30	2.5	1.2	2.0	1.7	-.7	.5	.2	-1.9	-.9	1.9	.1	1.0
31	2.3	.6	1.6	---	---	---	.7	-1.2	-.2	2.9	1.1	---
MONTH	4.4	-.2	1.9	2.8	-1.0	---	3.3	-2.5	---	4.4	-1.0	---

SAN JACINTO RIVER BASIN

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.1	1.1	2.2	1.7	.5	1.0	2.3	.4	1.5	2.3	.6	1.5
2	2.3	.7	1.4	1.5	.2	.8	2.6	.8	1.9	2.2	.4	1.4
3	1.5	.2	.9	1.5	-.5	---	2.0	.5	1.3	2.2	1.2	1.6
4	2.2	.1	1.2	2.3	.5	1.5	1.7	-.4	.6	2.0	.5	1.1
5	2.3	.3	1.5	2.3	.6	---	2.2	.5	1.4	2.3	1.1	1.7
6	1.6	-.6	.5	2.1	.1	---	2.9	1.3	2.0	2.4	1.5	1.8
7	1.1	-.9	.0	2.6	.8	1.8	2.4	.9	1.7	2.1	1.4	1.7
8	1.6	-.4	.6	2.4	-1.9	-.3	2.1	.8	1.4	2.6	1.4	1.9
9	2.1	.2	1.2	-.6	-2.5	-1.9	1.3	-.2	.4	2.9	1.1	2.1
10	2.3	.5	1.7	.9	-1.2	-.3	1.2	-.3	.4	1.5	.4	1.0
11	1.2	-.8	.2	1.7	.1	1.0	2.2	.0	1.2	2.3	.1	1.4
12	1.5	-.1	.6	1.8	.4	1.2	3.1	1.4	2.4	2.8	1.0	2.0
13	1.9	.4	1.1	2.1	1.1	1.5	2.8	1.5	2.1	2.9	1.2	2.2
14	2.6	1.1	1.7	2.0	.9	1.4	2.2	.5	1.6	3.2	1.6	2.4
15	3.1	2.3	2.7	2.6	1.2	2.0	2.6	.9	1.9	2.9	1.6	2.3
16	2.8	1.5	2.1	4.2	2.0	2.8	2.6	.9	1.7	2.4	.6	1.7
17	2.7	.2	1.1	2.2	1.1	1.8	1.9	.3	1.2	2.2	.7	1.6
18	2.1	.0	1.1	2.5	.9	1.9	2.1	.3	1.2	2.1	.1	1.1
19	2.1	.7	1.4	2.4	.4	1.5	1.8	.2	1.1	2.2	.4	1.3
20	1.5	-.4	.6	.4	-1.0	-.1	2.3	.3	1.4	2.4	1.4	1.7
21	3.2	.3	1.6	1.3	-1.0	.1	1.6	.0	.9	2.4	1.4	---
22	3.3	.3	1.4	1.7	-.5	.7	1.1	-.3	.4	1.8	.7	---
23	1.5	-.5	.5	1.9	-.1	1.0	1.4	-.3	.5	2.1	.5	1.5
24	1.9	.1	1.1	2.1	.5	1.3	1.8	.4	1.1	2.1	.4	1.4
25	2.9	1.0	1.9	2.1	-1.7	---	2.8	1.1	1.9	2.2	.4	1.5
26	2.9	.4	1.8	2.4	.9	---	3.1	.9	2.1	2.4	.4	1.5
27	2.2	.5	1.4	3.0	1.7	2.3	2.5	1.0	1.8	2.8	.3	1.6
28	2.6	.9	1.6	2.3	1.1	1.7	1.9	-.1	1.1	2.1	.2	---
29	---	---	---	2.9	1.3	2.2	2.8	-.1	1.6	2.4	1.8	---
30	---	---	---	3.8	1.8	---	2.7	.9	1.9	2.3	.4	1.4
31	---	---	---	2.1	1.2	---	---	---	---	2.2	.3	1.2
MONTH	3.3	-.9	1.3	4.2	-2.5	---	3.1	-.4	1.4	3.2	.1	---

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1.9	.3	1.1	1.6	.3	.9	1.3	-.1	.9	2.8	1.4	2.3
2	2.3	1.0	1.4	1.9	.4	1.2	1.4	-.1	.8	3.3	1.6	2.7
3	2.4	1.0	1.7	2.8	.9	2.0	2.4	-.1	1.5	2.9	1.5	2.4
4	2.6	1.2	2.0	2.1	.3	1.4	2.7	.9	2.0	3.1	1.3	2.5
5	2.5	.7	1.8	1.5	.1	1.0	2.1	.5	1.4	3.4	1.5	2.5
6	1.7	.2	1.1	1.3	-.3	.6	1.9	.1	1.2	2.9	1.4	2.2
7	2.7	.4	1.7	1.5	-.6	.7	2.2	.1	1.2	4.0	1.6	2.6
8	3.5	1.6	2.8	1.5	-.1	1.0	2.2	.1	1.4	3.9	2.5	3.2
9	3.3	1.7	2.5	1.5	-.1	.9	1.9	.5	1.4	4.4	2.6	3.3
10	3.0	1.3	2.3	1.3	-.3	.7	1.8	.3	1.2	6.2	4.3	5.2
11	3.3	1.7	2.4	1.1	-.7	.4	1.7	.4	1.2	9.2	4.9	7.1
12	2.7	.7	1.9	1.1	-.6	.4	1.8	.6	1.3	5.4	2.6	4.1
13	2.2	.4	1.4	1.2	-.5	.5	1.6	.2	1.0	3.9	2.2	3.2
14	1.9	1.5	1.6	1.4	-.3	.5	1.6	-.1	.9	4.4	2.4	3.5
15	1.9	1.0	1.5	1.3	-.2	.5	1.9	.0	1.2	3.9	2.2	3.2
16	2.2	.2	1.4	1.2	-.1	.6	1.9	.1	1.2	3.8	2.1	3.1
17	2.9	1.5	2.1	1.0	-.3	.5	1.9	.0	1.1	3.3	2.0	2.7
18	2.6	1.5	2.1	1.2	-.8	.5	1.9	.1	1.3	3.2	1.9	2.6
19	2.5	.9	1.9	1.4	-.5	.8	2.0	.2	1.4	3.3	1.8	2.8
20	2.3	.8	1.7	1.5	-.4	.9	2.6	.7	1.8	2.9	1.9	2.3
21	2.3	.6	1.7	1.6	-.3	1.0	3.6	.9	2.3	2.6	1.4	2.0
22	2.1	.5	1.4	1.6	-.1	1.0	4.2	2.4	3.2	2.4	1.2	1.8
23	2.2	.7	1.6	1.8	.0	1.1	3.2	1.7	2.3	2.2	.9	1.6
24	2.0	.1	1.3	1.8	.0	1.1	2.6	1.2	2.0	2.3	1.4	1.9
25	2.7	.1	1.6	1.9	.1	1.1	2.4	1.2	1.9	3.0	1.8	2.2
26	2.5	.9	1.8	1.7	.0	1.0	2.4	1.2	1.8	3.2	1.9	2.7
27	3.1	.8	1.8	1.7	.2	1.0	2.0	.7	1.5	2.8	1.0	2.0
28	4.1	1.0	1.9	1.8	.4	1.1	1.7	.5	1.1	2.6	1.4	2.1
29	2.2	.5	1.4	1.7	.7	1.2	1.6	.6	1.2	3.0	.7	2.1
30	1.9	.7	1.3	1.5	.4	1.1	2.2	.4	1.5	1.9	.5	1.4
31	---	---	---	1.4	.3	1.0	2.4	.7	1.8	---	---	---
MONTH	4.1	.1	1.7	2.8	-.8	.9	4.2	-.1	1.5	9.2	.5	2.8

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Apr 1986 to current year.
 WATER TEMPERATURE: Apr 1986 to current year.
 DISSOLVED OXYGEN: Apr 1986 to current year.

INSTRUMENTATION.--Since Apr 1986, a three-parameter water-quality monitor continuously records specific conductance, water temperature, and dissolved oxygen at this station. In Sep 1995, a digital QW multiprobe was installed as a replacement to the minimonitor.

REMARKS.-- Water-quality monitor data have been collected one foot below the water surface since Feb 3, 1998. From Apr 1986 to Jan 1987 data were collected at a fixed elevation of 6.5 ft below sea level using a submersible pump. From Feb 1987 until Jan 1988 data were collected at a fixed elevation of 5.5 ft below sea level using a submersible pump. Dissolved oxygen data are not corrected for salinity. The upper limit of the specific conductance instrument is 20,000 microsiemens. Due to tidal effects, location of probe units, and channel morphology, the water-quality data collected at this location may not be representative of the entire flow through the cross-section.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, >20,000 microsiemens, on Oct 12-14, Dec 13, 1988, Jan 23, 1989; minimum 60 microsiemens Jun 26, 1989.

WATER TEMPERATURE: Maximum 36.5°C Aug 21, 1990; minimum, 7.0°C, on Jan 13-14, 1997.

DISSOLVED OXYGEN: Maximum, 20.0 mg/L, Jun 6, 1996; minimum, 0.0 mg/L, on several days during 1987-88 water year.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 17,100 microsiemens, Sep 5; minimum, 113 microsiemens, Sep 11.

WATER TEMPERATURE: Maximum, 34.6°C, Aug 3; minimum, 10.8°C, Dec 16.

DISSOLVED OXYGEN: Maximum, 14.5 mg/L, May 4; minimum, 0.6 mg/L, Jul 16.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1190	477	729	1650	841	1210	3270	1380	2030	582	347	447
2	963	340	622	2000	1090	1500	3060	595	1500	2530	482	1090
3	738	405	581	2260	1200	1770	2050	358	716	2500	1200	1830
4	693	306	527	2270	1060	1650	772	430	552	3110	1210	1970
5	702	344	503	2190	538	1350	718	346	543	4310	1270	2110
6	656	404	496	3180	535	1560	676	356	482	2550	586	1150
7	1090	452	702	6410	2300	3590	1150	319	576	1830	168	479
8	1090	355	517	4380	2030	3330	1150	176	288	346	194	244
9	871	242	482	4390	1480	2910	496	232	336	351	254	314
10	337	239	296	5040	2400	3380	540	310	436	255	201	220
11	454	290	383	5340	2050	3100	519	315	427	243	190	212
12	294	231	253	5130	1080	2190	640	387	522	280	236	256
13	286	188	234	5490	1190	2840	634	395	518	487	259	378
14	305	190	210	5970	2030	3390	3210	393	824	555	350	493
15	308	229	261	4440	954	2260	1040	385	613	531	446	473
16	285	222	259	2060	972	1540	2030	435	694	690	458	584
17	291	223	246	2890	770	1800	3000	1130	1770	674	213	395
18	473	237	343	5540	2820	3840	3940	1550	2310	243	205	222
19	627	329	466	5810	2000	4020	5180	1860	3860	275	211	237
20	658	329	463	7430	2970	5020	5100	857	3800	303	252	280
21	642	313	465	7990	4560	6290	975	398	528	381	299	320
22	686	379	532	8370	4420	6180	944	436	683	400	190	223
23	1100	381	658	7880	5010	6450	830	450	628	365	253	332
24	980	314	607	9790	4260	6960	3010	364	505	489	354	448
25	1640	639	1050	7730	5120	6540	1300	325	568	532	419	460
26	2240	883	1560	8860	4140	6660	819	286	365	520	463	491
27	2280	635	1480	8040	5290	6320	1210	335	414	581	502	539
28	1270	338	656	7560	1360	5460	567	240	374	665	538	606
29	981	292	601	3580	976	1370	743	415	584	682	587	641
30	1090	359	630	2620	1140	1770	847	377	550	703	624	675
31	1650	504	732	---	---	---	704	370	508	730	657	696
MONTH	2280	188	566	9790	535	3540	5180	176	919	4310	168	607

SAN JACINTO RIVER BASIN

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	766	682	729	282	261	273	3380	1850	2300	3980	2490	3100
2	754	715	740	267	252	262	2440	1700	1980	4440	2440	3240
3	762	723	739	258	232	250	3360	1710	2330	5910	2700	3780
4	802	752	776	301	238	262	3350	1800	2380	6370	3640	4910
5	1750	802	1060	541	269	329	2820	2030	2370	5600	3410	4100
6	2790	1110	1740	519	374	429	2820	1810	2170	5470	2710	3580
7	3000	1860	2270	538	308	376	2720	1790	2250	4820	2750	3330
8	3280	2220	2640	4150	411	1270	2740	1580	2090	5550	3450	4210
9	2850	1880	2390	6660	2100	3620	3060	1300	2180	6020	2900	4340
10	2830	525	1610	6060	2290	3770	2840	1590	2110	4110	2220	2890
11	995	537	655	6790	2630	4480	3000	1670	2400	3800	2440	3030
12	1010	502	706	5770	3060	4180	2500	1560	2000	4440	2700	3810
13	1260	602	925	4580	2320	3620	2010	1480	1690	3980	3010	3520
14	2040	713	1220	3860	1450	2450	2160	1330	1640	3430	2720	3090
15	1800	873	1250	3750	1430	2220	1800	1280	1550	4310	2560	3310
16	1400	460	836	2480	399	1250	2770	1150	1640	3110	2210	2550
17	676	332	467	1550	371	668	2620	1430	1890	5000	2400	3380
18	1380	414	602	1810	485	839	1950	1610	1690	4400	2530	3180
19	578	348	433	1610	517	839	1970	1360	1690	4320	2470	3350
20	1540	380	477	2580	880	1290	1680	953	1240	4720	2690	3370
21	601	348	492	3540	925	1750	3200	901	1640	6150	3030	4570
22	824	197	349	2850	1280	1980	2950	1820	2260	---	---	---
23	325	200	245	3580	1260	1940	4430	2290	2770	---	---	---
24	316	251	285	2470	1530	2030	4260	2830	3550	---	---	---
25	328	214	241	2380	1650	1950	3420	2350	2980	---	---	---
26	338	260	295	2760	1760	2300	4690	1910	3430	---	---	---
27	329	257	280	2910	1740	2220	4150	2080	2940	---	---	---
28	367	282	304	3040	1550	1930	3650	1880	2480	---	---	---
29	---	---	---	2510	1650	2050	4850	1820	3150	3240	2930	3140
30	---	---	---	2650	1870	2270	4440	2510	3310	3120	2850	2940
31	---	---	---	2300	1190	1540	---	---	---	3070	2880	2960
MONTH	3280	197	884	6790	232	1760	4850	901	2270	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3100	2900	2960	3190	1100	1750	9780	4640	6330	9230	6320	7320
2	2980	2920	2930	4830	1810	3310	7430	4910	6110	7990	5530	6740
3	---	---	---	5140	2000	3600	8790	5430	6880	9510	5560	6850
4	6730	3570	4580	3010	1650	2010	7980	5560	6940	9840	5170	7100
5	6140	3570	4580	4020	1480	2240	7500	5230	6160	17100	8450	10900
6	4960	1870	3140	2510	1540	1860	8660	5190	6420	13300	7160	9670
7	5530	1300	2670	4500	1740	3140	8690	5010	6480	10000	5760	7620
8	5310	2710	3800	3990	2060	2680	8580	4300	6240	10700	4830	6930
9	3850	1630	2340	4430	2110	3370	8740	4690	5820	7590	3790	5210
10	4670	1590	2850	4140	2890	3400	7450	2790	4490	7150	3370	5660
11	5960	2420	3290	3910	2760	3130	10000	7220	8400	4260	113	926
12	4910	2240	3370	5230	2690	3740	9400	6940	7920	179	117	142
13	6330	1940	3650	5610	3090	3870	10600	7230	8680	277	179	224
14	6520	2580	4250	5470	2650	4360	10600	7370	9120	364	265	310
15	5640	2520	3690	3810	1240	2250	10800	6370	8960	459	311	374
16	5910	3770	4910	4310	1980	2890	7760	5260	6250	434	283	377
17	6030	4000	5060	3960	2010	2810	8340	4920	6270	423	279	317
18	6160	3410	4960	3730	979	2090	7350	4600	5740	431	318	348
19	5870	3330	4590	3610	1560	2470	6400	1790	2860	411	212	291
20	5300	2240	3310	3680	2180	2670	8270	2730	5690	383	221	282
21	4250	2240	2980	5580	2330	3060	7020	2760	4900	1240	307	470
22	4070	2240	2840	5440	3140	3970	5410	834	2750	584	276	367
23	5830	2700	4090	6090	2990	4650	2730	457	1430	595	269	371
24	4660	2510	3480	5680	3910	4680	3570	804	1650	560	250	354
25	5300	2530	4230	7990	4030	6100	4290	1180	2360	483	222	336
26	5430	2820	3850	7580	5280	6250	4740	1580	2800	598	346	444
27	5220	2340	3400	9120	4800	6350	4280	1590	2890	646	348	438
28	3580	301	1930	9700	5860	7370	6480	3360	4440	1200	398	577
29	960	460	683	12100	6400	8140	7100	3390	5620	1250	438	655
30	2000	726	1200	6680	5050	5760	7950	4400	6210	915	385	542
31	---	---	---	9900	5400	6770	8890	5030	6590	---	---	---
MONTH	---	---	---	12100	979	3890	10800	457	5590	17100	113	2740

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	26.9	25.5	26.2	21.8	20.6	21.1	19.3	17.5	18.1	13.2	11.6	12.2
2	27.4	25.8	26.4	21.5	20.4	20.8	18.8	16.5	17.4	15.4	12.3	14.2
3	27.2	25.5	26.4	21.2	20.0	20.4	17.7	16.0	16.9	18.0	14.4	16.4
4	26.4	25.7	25.9	20.7	19.8	20.2	17.3	16.4	16.7	18.6	16.2	17.3
5	26.2	25.6	25.8	22.1	19.8	20.7	16.9	15.1	15.8	18.8	16.5	17.8
6	27.6	25.7	26.6	21.1	20.0	20.7	15.1	13.7	14.3	20.8	18.3	19.7
7	27.0	25.9	26.4	22.1	19.7	20.9	15.8	14.3	14.6	19.2	17.1	17.7
8	26.3	25.4	25.8	23.1	19.4	21.2	16.2	14.7	15.5	17.3	15.9	16.5
9	25.9	25.2	25.6	22.0	20.2	21.1	16.7	16.0	16.4	16.4	15.1	15.9
10	25.7	25.2	25.5	22.0	18.9	20.4	16.4	15.6	15.9	15.1	14.5	14.8
11	25.8	25.5	25.6	20.9	18.1	18.9	15.9	14.4	15.1	15.6	14.6	15.0
12	26.1	25.4	25.7	20.3	17.4	18.1	15.0	13.3	13.9	16.7	15.5	16.1
13	25.9	23.3	24.9	19.3	17.0	17.8	13.7	12.6	12.9	19.1	16.2	17.5
14	23.3	22.0	22.6	19.9	17.7	18.2	12.8	11.4	12.0	19.6	16.9	18.7
15	22.6	21.8	22.1	20.7	15.7	17.3	11.9	11.0	11.4	19.3	17.6	18.3
16	22.3	21.8	22.0	16.3	14.8	15.4	12.5	10.8	11.7	18.5	16.9	17.8
17	22.6	21.5	21.9	15.6	14.2	14.8	14.8	12.4	13.8	17.3	15.0	15.9
18	22.6	21.3	21.6	18.1	14.5	16.5	16.7	13.9	15.2	15.5	15.0	15.2
19	22.3	21.0	21.5	17.4	15.0	15.9	17.2	14.5	16.0	15.9	15.0	15.4
20	22.1	20.9	21.4	18.7	15.0	17.3	18.4	15.8	17.0	16.2	15.6	15.8
21	22.7	21.3	21.7	19.1	17.2	17.9	19.2	16.5	18.4	17.7	15.8	16.6
22	22.0	21.3	21.6	18.9	16.9	17.6	18.5	17.8	18.1	18.9	16.8	18.5
23	22.7	21.3	21.9	18.9	16.7	17.7	18.0	16.9	17.5	19.5	18.1	18.5
24	23.8	22.5	23.0	19.4	17.9	18.4	17.4	16.5	16.8	19.1	17.7	18.4
25	24.3	23.4	23.8	20.1	18.5	19.1	17.2	15.3	16.2	18.0	17.5	17.7
26	24.0	21.2	22.2	21.0	17.8	19.6	15.5	14.5	14.9	18.4	17.2	17.6
27	21.7	19.9	20.9	21.0	19.3	20.2	14.6	13.7	14.0	17.6	17.0	17.3
28	20.5	18.8	19.4	21.6	19.2	20.5	14.1	12.5	13.1	19.1	16.9	17.6
29	19.7	18.4	18.9	21.1	19.4	20.3	13.0	12.0	12.4	19.9	17.2	18.1
30	20.3	18.7	19.4	20.0	18.8	19.4	12.7	11.4	12.0	20.0	17.8	18.8
31	21.7	19.5	20.6	---	---	---	12.3	11.3	11.8	19.3	18.2	18.8
MONTH	27.6	18.4	23.3	23.1	14.2	18.9	19.3	10.8	15.0	20.8	11.6	17.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	19.7	18.4	19.0	17.6	16.8	17.2	24.8	21.6	23.0	25.8	23.4	24.4
2	19.1	18.3	18.7	17.2	16.4	16.7	23.4	22.6	23.0	25.8	23.8	24.7
3	19.1	18.3	18.6	17.6	15.6	16.4	23.8	22.2	23.0	26.6	24.5	25.2
4	19.2	18.3	18.5	16.5	16.1	16.3	23.7	21.9	22.6	27.7	24.1	25.5
5	18.5	17.2	17.8	19.9	16.3	17.6	24.2	21.9	23.0	26.0	24.8	25.4
6	18.7	16.6	17.5	19.6	17.8	18.6	23.4	22.3	22.7	27.6	25.1	26.0
7	17.7	16.7	17.1	20.5	18.4	18.9	25.1	22.4	23.3	28.8	25.5	26.7
8	17.7	16.7	17.3	20.2	17.3	18.3	24.8	22.7	23.5	27.8	25.8	26.4
9	18.5	16.7	18.0	18.8	16.7	17.4	24.1	22.4	23.0	27.3	25.5	26.4
10	19.1	17.1	18.3	18.6	16.9	17.8	25.3	22.4	23.5	27.7	25.6	26.5
11	18.2	17.1	17.6	19.6	16.9	18.2	24.8	22.5	23.4	28.8	25.6	27.1
12	18.1	17.2	17.6	18.8	16.3	17.4	23.6	22.8	23.2	27.9	26.1	26.8
13	19.0	17.3	18.2	18.5	16.4	17.5	24.0	23.1	23.5	27.1	26.2	26.7
14	18.5	17.4	17.8	18.5	16.5	17.5	24.8	23.3	23.9	27.6	26.6	27.1
15	18.9	17.4	18.1	17.4	16.7	17.0	24.7	23.6	24.1	28.8	26.5	27.4
16	18.3	15.3	17.3	18.1	17.1	17.7	24.6	23.1	24.2	29.4	27.0	27.9
17	16.0	14.7	15.3	19.6	17.8	18.5	24.3	22.5	23.3	28.9	27.1	27.7
18	15.9	14.3	15.2	20.0	18.3	19.1	23.3	22.8	22.9	30.0	27.1	28.2
19	16.6	14.9	15.6	20.7	19.5	19.9	23.9	22.2	23.1	30.2	27.5	28.3
20	17.6	15.5	16.3	20.0	18.9	19.4	24.1	21.7	22.7	29.6	27.8	28.4
21	17.3	16.1	16.5	21.5	18.9	19.5	22.8	21.8	22.4	29.7	27.2	28.2
22	16.8	14.2	14.8	20.5	19.2	19.8	23.9	21.5	22.7	---	---	---
23	16.5	14.4	15.3	21.6	18.9	20.0	24.7	22.0	23.2	---	---	---
24	17.1	15.9	16.4	21.7	19.3	20.8	25.0	22.5	23.5	---	---	---
25	18.0	16.2	16.8	22.6	20.5	21.3	24.7	23.1	23.8	---	---	---
26	18.1	17.3	17.7	22.2	20.7	21.4	24.3	23.0	23.4	---	---	---
27	18.3	17.8	17.9	22.8	20.6	21.5	24.7	23.1	23.9	---	---	---
28	18.1	17.6	17.8	23.8	21.1	22.5	25.1	22.5	23.7	---	---	---
29	---	---	---	24.2	22.0	23.0	24.2	22.5	23.4	31.1	29.1	30.2
30	---	---	---	23.6	22.5	23.0	26.1	23.0	24.1	30.9	28.5	29.4
31	---	---	---	23.9	22.2	23.0	---	---	---	30.9	28.9	29.5
MONTH	19.7	14.2	17.3	24.2	15.6	19.1	26.1	21.5	23.3	---	---	---

SAN JACINTO RIVER BASIN

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	30.6	29.0	29.5	31.7	29.5	30.4	34.3	31.2	32.4	31.6	29.3	30.5
2	30.9	29.1	29.9	32.7	30.1	31.2	34.0	31.3	32.4	32.0	29.3	30.7
3	30.5	29.2	29.8	31.2	29.9	30.5	34.6	31.6	32.7	32.5	29.9	31.1
4	30.4	29.1	29.6	32.1	29.7	30.6	33.9	31.3	32.4	32.5	29.6	31.2
5	30.9	29.2	29.8	32.0	30.1	30.9	33.9	31.4	32.4	32.5	30.0	31.0
6	29.5	28.3	28.9	33.7	30.1	31.3	32.7	31.1	31.9	31.3	30.3	30.7
7	30.3	27.0	28.2	33.1	30.9	31.5	31.7	30.3	30.9	31.1	29.3	30.2
8	29.2	27.9	28.6	33.7	30.7	32.0	32.4	30.0	30.8	30.4	29.2	29.7
9	29.7	27.7	28.6	33.5	31.1	32.0	32.8	29.8	31.0	29.7	28.6	29.2
10	30.3	28.2	29.2	33.4	31.1	32.0	33.0	30.0	31.3	29.3	27.6	28.6
11	30.5	28.6	29.5	33.3	31.2	32.1	33.7	30.9	31.9	27.7	24.5	25.3
12	30.3	28.9	29.5	33.2	31.4	32.1	34.1	31.1	32.2	25.9	25.1	25.4
13	31.0	29.1	29.8	32.4	31.3	31.7	33.4	31.4	32.0	27.0	25.9	26.3
14	30.9	29.3	30.0	33.2	31.1	31.7	31.8	30.8	31.4	28.3	26.5	27.2
15	31.2	29.6	30.3	32.5	30.5	31.2	33.3	30.4	31.5	28.3	27.1	27.6
16	31.7	29.8	30.5	32.9	30.2	31.3	32.0	30.6	31.3	27.9	27.1	27.6
17	31.2	29.9	30.4	33.6	30.5	31.6	32.2	30.4	30.9	29.1	27.0	27.8
18	31.5	29.8	30.6	32.9	30.5	31.5	31.0	29.7	30.3	28.8	27.4	28.0
19	31.9	29.9	30.8	33.0	30.4	31.4	31.9	28.9	30.0	29.3	27.5	27.9
20	32.2	30.1	31.1	33.4	30.4	31.5	32.4	28.8	30.3	28.4	27.2	27.7
21	32.5	30.2	31.1	32.9	30.6	31.5	30.0	28.7	29.5	29.3	27.5	28.0
22	32.0	30.4	31.0	33.6	30.5	31.7	29.6	27.3	28.5	28.9	27.7	28.2
23	31.9	30.3	30.8	33.4	30.7	31.8	29.4	27.2	28.0	29.5	28.0	28.6
24	32.5	30.2	31.1	33.8	30.8	32.0	30.4	27.6	28.7	29.0	28.2	28.4
25	32.0	30.3	31.0	33.5	31.1	32.0	31.1	28.5	29.6	29.9	28.0	28.8
26	31.8	30.5	31.0	33.8	31.1	32.2	32.0	29.2	30.2	29.1	28.3	28.7
27	31.4	30.3	30.9	34.3	31.3	32.3	31.9	29.4	30.3	30.0	28.4	28.8
28	30.7	27.2	29.6	33.4	31.5	32.1	33.2	30.0	31.1	29.4	28.2	28.7
29	29.4	27.3	28.2	33.1	31.2	32.0	33.4	30.4	31.5	29.4	28.5	28.9
30	31.3	28.5	29.5	33.5	30.9	32.1	31.7	30.3	31.1	29.3	28.5	28.8
31	---	---	---	34.5	31.2	32.5	31.5	30.0	30.6	---	---	---
MONTH	32.5	27.0	30.0	34.5	29.5	31.6	34.6	27.2	30.9	32.5	24.5	28.7

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.1	5.1	5.6	6.9	5.0	6.0	5.7	3.3	4.6	8.4	7.6	8.1
2	6.1	4.8	5.5	6.8	4.9	5.8	7.8	4.1	6.4	7.9	6.3	7.2
3	5.7	4.6	5.1	6.9	5.5	6.5	8.4	2.9	6.5	7.0	5.7	6.4
4	5.8	4.1	5.0	7.2	6.2	6.7	6.3	2.5	5.3	6.4	5.2	5.9
5	5.5	4.2	4.9	7.5	6.4	6.9	7.0	5.1	5.9	5.7	4.0	5.2
6	5.0	3.2	4.3	7.0	4.7	5.6	7.7	6.0	6.5	5.1	3.5	4.6
7	5.3	3.0	4.2	5.3	3.3	4.8	7.2	6.3	6.8	6.7	4.5	5.7
8	5.9	3.5	4.6	6.2	3.8	5.1	7.1	6.0	6.5	6.4	4.7	5.6
9	6.3	4.1	5.2	5.7	4.6	5.2	6.8	5.0	5.8	7.1	4.4	5.7
10	6.6	5.2	5.9	5.9	4.7	5.3	6.5	5.2	6.2	7.2	6.0	6.9
11	6.0	5.0	5.5	6.4	4.2	5.4	6.8	6.1	6.5	7.1	5.7	6.8
12	6.5	5.5	6.1	7.4	5.6	6.6	7.2	6.3	6.8	6.9	4.3	6.2
13	6.8	5.0	5.9	7.3	5.8	6.5	7.3	6.5	7.0	6.6	4.4	5.6
14	7.2	6.4	6.7	6.9	5.8	6.5	7.7	6.3	7.2	5.4	4.0	4.7
15	7.0	5.6	6.3	8.2	6.0	7.0	8.1	6.3	7.5	4.3	2.6	3.6
16	7.1	5.9	6.5	8.4	6.4	7.6	8.0	6.6	7.5	4.6	1.7	3.5
17	7.3	6.2	6.7	8.9	6.9	7.7	7.3	6.3	6.8	7.3	3.3	5.7
18	7.2	6.1	6.6	7.9	5.2	6.7	7.0	5.8	6.2	7.2	6.0	6.8
19	7.2	6.1	6.6	7.4	5.1	6.3	6.2	5.2	5.6	7.0	6.2	6.6
20	7.2	6.5	7.0	6.7	4.8	5.8	5.9	5.1	5.4	6.8	6.0	6.4
21	7.2	6.2	6.8	6.1	4.5	5.1	5.9	4.0	5.2	7.0	5.3	6.4
22	6.9	6.2	6.6	7.0	4.8	5.8	5.4	2.3	4.5	6.4	4.9	5.5
23	6.9	6.3	6.6	6.5	4.9	5.9	5.5	3.2	4.7	5.3	2.2	4.3
24	6.7	5.0	5.6	6.8	5.2	6.0	6.7	3.6	5.6	4.9	1.8	3.6
25	5.4	4.1	4.6	6.8	5.2	6.1	6.9	5.0	5.8	4.9	1.9	3.5
26	6.1	4.1	5.5	6.4	4.9	5.5	7.6	6.0	6.9	4.4	2.2	3.8
27	7.3	5.2	6.0	5.6	4.4	5.0	7.6	6.3	6.9	5.4	3.4	4.4
28	7.7	6.1	7.2	6.3	4.0	5.0	8.1	6.7	7.4	5.0	3.1	4.2
29	7.9	6.8	7.4	6.6	2.9	4.9	8.3	6.8	7.5	4.6	2.6	3.8
30	7.7	6.3	7.4	5.4	2.3	3.8	8.4	7.6	8.0	4.1	2.5	3.5
31	7.5	6.0	6.7	---	---	---	8.6	7.8	8.1	3.8	1.6	3.1
MONTH	7.9	3.0	6.0	8.9	2.3	5.9	8.6	2.3	6.4	8.4	1.6	5.3

08074710 BUFFALO BAYOU AT TURNING BASIN, HOUSTON, TX--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.0	1.6	2.8	6.8	5.3	5.9	6.5	1.2	3.7	7.8	2.9	5.1
2	3.7	1.9	2.8	7.2	5.7	6.3	5.3	1.0	3.0	10.9	3.0	6.9
3	3.8	1.2	2.6	7.7	5.9	6.7	4.7	1.0	2.6	12.4	3.9	7.5
4	4.3	1.5	2.8	7.2	6.2	6.8	7.0	1.4	3.3	14.5	1.5	6.8
5	3.9	1.4	2.9	7.0	5.6	6.4	6.7	1.5	3.9	8.6	4.2	6.3
6	4.2	1.4	2.6	6.2	4.7	5.5	7.8	2.2	5.8	8.3	5.3	6.3
7	4.5	1.9	3.2	5.9	4.2	5.4	9.0	2.7	4.7	7.6	5.1	6.0
8	4.0	2.4	3.0	5.7	4.9	5.4	7.1	2.6	4.6	8.6	3.8	5.7
9	3.4	2.2	2.9	6.5	5.0	5.6	6.7	1.7	4.1	7.5	2.3	4.5
10	4.3	1.4	2.7	6.6	4.9	5.7	8.0	1.1	4.4	6.0	2.2	3.9
11	5.2	1.5	3.5	6.6	4.4	5.6	7.9	1.0	4.4	10.4	1.1	5.0
12	6.2	1.5	4.4	6.4	4.2	5.4	6.7	3.8	5.3	9.0	1.6	4.5
13	5.8	1.9	3.7	6.8	4.4	5.5	5.8	2.8	4.5	5.7	1.0	3.1
14	5.6	1.9	3.0	7.3	5.0	6.2	6.1	1.6	3.8	3.3	1.0	1.9
15	4.7	1.1	2.8	7.2	5.5	6.2	5.1	2.4	3.5	3.5	1.1	1.5
16	9.0	1.0	4.3	6.6	3.2	5.6	3.5	1.0	2.2	5.9	1.0	2.7
17	8.9	1.9	6.1	6.0	2.0	4.7	3.1	1.0	2.0	5.1	1.0	2.2
18	10.3	1.7	6.9	6.4	1.2	4.4	5.2	2.0	4.0	8.9	1.1	3.7
19	10.6	4.7	7.9	6.3	2.4	5.0	5.2	3.7	4.3	10.3	1.1	4.2
20	8.8	3.0	6.5	6.2	3.7	5.4	5.6	3.6	4.5	9.6	2.5	5.7
21	8.8	3.7	7.3	6.1	3.4	4.9	5.8	3.5	4.2	6.2	1.5	3.4
22	10.2	1.9	6.7	5.7	3.3	4.5	5.9	3.4	4.3	---	---	---
23	9.6	1.0	5.1	6.5	3.6	5.1	5.8	2.1	4.3	---	---	---
24	9.1	1.9	6.0	6.2	4.2	5.5	5.5	1.8	3.7	---	---	---
25	8.4	6.7	7.9	6.8	3.9	5.5	6.1	2.7	4.7	---	---	---
26	7.8	5.5	7.0	6.2	4.8	5.5	5.1	1.8	3.3	---	---	---
27	6.9	5.2	5.7	6.5	4.9	5.6	4.3	1.4	3.1	---	---	---
28	6.9	4.2	5.3	7.7	4.0	6.0	4.6	1.1	3.0	---	---	---
29	---	---	---	7.9	5.1	6.2	4.8	1.2	3.5	12.3	6.8	8.7
30	---	---	---	6.0	4.5	5.1	6.8	2.3	4.2	12.3	10.3	11.4
31	---	---	---	6.0	2.0	4.3	---	---	---	12.1	10.2	11.2
MONTH	10.6	1.0	4.6	7.9	1.2	5.5	9.0	1.0	3.9	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.0	1.4	10.9	7.3	1.8	4.0	12.5	4.6	7.0	4.7	1.4	2.9
2	11.3	2.9	6.8	12.4	1.9	5.7	8.5	4.4	6.2	5.0	1.4	2.7
3	9.0	4.3	6.4	6.1	1.4	3.9	9.7	3.4	5.8	11.4	1.4	4.0
4	6.1	2.3	4.5	9.4	2.3	4.5	11.1	3.6	5.8	11.8	2.0	4.8
5	7.7	3.1	5.0	7.2	1.8	4.7	11.8	3.9	7.0	8.4	1.7	4.3
6	4.2	1.1	2.8	13.8	3.0	6.6	6.7	2.9	4.5	5.5	2.1	3.7
7	3.5	1.0	1.5	10.1	2.9	6.1	4.1	1.9	2.8	4.7	2.2	3.2
8	3.8	1.0	2.1	14.2	2.7	9.5	5.3	1.5	3.3	3.8	1.7	2.8
9	4.9	1.6	3.0	11.6	3.8	7.7	4.8	2.4	4.0	3.8	1.5	2.8
10	7.3	1.3	3.5	14.1	5.4	9.1	5.9	2.8	3.9	4.2	2.7	3.4
11	8.0	2.2	5.0	13.9	5.2	9.4	6.2	1.6	4.3	6.0	3.4	5.1
12	6.5	2.3	4.5	12.3	3.8	7.6	8.2	3.5	5.6	5.8	4.1	4.9
13	5.5	1.5	3.7	10.3	3.3	6.6	9.0	2.7	5.5	4.6	3.2	3.8
14	6.0	2.1	4.0	8.6	2.8	5.0	5.9	2.5	4.1	4.2	2.7	3.6
15	10.3	2.8	5.5	5.2	1.2	3.1	7.1	1.0	4.2	5.9	2.7	4.1
16	7.4	2.2	4.2	5.6	.6	2.3	7.1	2.8	4.5	5.2	3.4	4.3
17	5.6	2.5	3.6	10.7	1.4	4.5	5.4	3.1	3.9	6.2	3.7	4.7
18	5.9	1.9	3.5	9.1	2.4	4.8	4.0	1.1	3.1	5.5	3.2	4.2
19	7.1	1.4	4.1	6.6	1.0	3.6	3.9	1.5	2.9	5.0	2.7	4.0
20	9.7	2.0	5.9	7.6	1.9	3.6	3.9	1.5	2.3	5.0	3.3	4.4
21	11.4	1.3	7.2	6.8	2.0	3.8	3.3	1.5	2.4	4.9	3.2	4.1
22	13.5	3.4	7.6	9.0	1.8	4.5	4.0	1.9	2.7	4.0	2.5	3.2
23	8.0	1.6	4.9	9.7	2.6	4.6	4.4	2.8	3.5	4.1	2.2	3.2
24	10.5	2.7	6.2	8.3	2.7	5.2	3.9	2.4	3.0	4.0	3.1	3.7
25	8.5	2.0	5.3	9.1	2.0	4.9	3.7	2.4	3.0	4.9	2.9	3.9
26	7.2	1.2	4.2	7.8	2.1	5.2	3.7	1.9	2.6	4.0	2.4	3.4
27	6.9	1.9	4.1	7.3	2.5	4.7	3.5	2.0	2.8	2.9	1.7	2.3
28	4.8	2.2	3.7	10.8	2.3	4.9	4.1	1.7	2.7	3.9	1.8	3.1
29	5.0	1.8	3.2	7.4	1.2	4.0	3.7	1.6	2.6	3.9	3.0	3.6
30	5.0	1.9	3.3	9.8	3.3	6.1	3.8	1.6	2.8	3.8	3.1	3.4
31	---	---	---	10.8	2.0	5.5	4.0	1.1	2.4	---	---	---
MONTH	13.5	1.0	4.7	14.2	.6	5.3	12.5	1.0	3.9	11.8	1.4	3.7

SAN JACINTO RIVER BASIN

08074800 KEEGANS BAYOU AT ROARK ROAD NEAR HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°39'23", long 95°33'43", Harris County, Hydrologic Unit 12040104, on right bank at upstream side of bridge on Roark Road in southwest Houston.

DRAINAGE AREA.--12.7 mi², Oct 1, 1976, to Dec 31, 1977, 12.0 mi²; Aug 1964 to Sep 30, 1976, 11.6 mi². Drainage area changes were the result of ditch relocations or extensions.

PERIOD OF RECORD.--Aug 1964 to Sep 1981 (daily mean discharges). Oct 1981 to Sep 1992 (annual maximum discharge). Oct 1992 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WRD TX-74-1: Drainage area. WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is sea level, 1957 adjustment; unadjusted for land-surface subsidence. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records poor. No known regulation or diversions.

AVERAGE DISCHARGE.--17 years, (water years 1965-81), 12.3 ft³/s, (8,910 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,880 ft³/s Mar 4, 1992, elevation, 75.91 ft; no flow for many days.

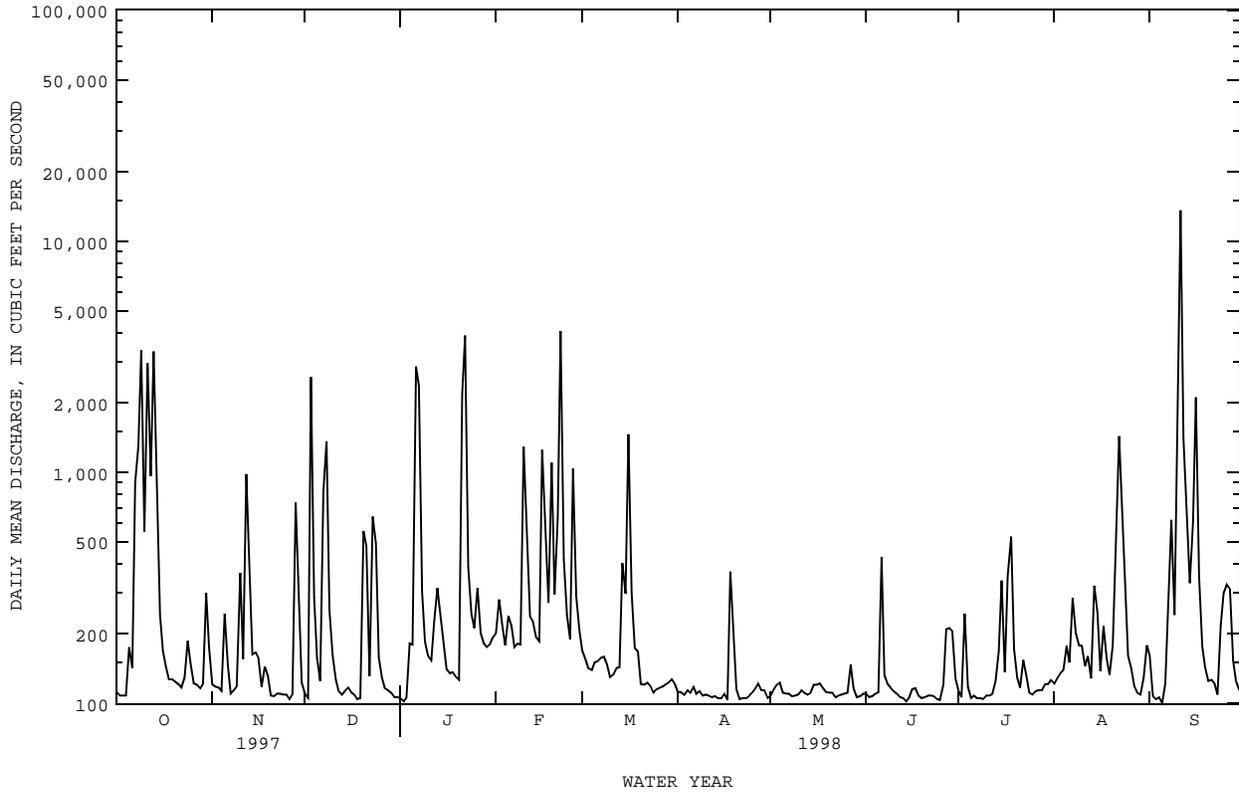
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 9	0545	2,220	71.77	Jan 6	2015	2,240	71.79
Oct 13	0900	1,970	71.30	Feb 21	2400	2,470	72.23
Dec 3	0430	1,760	70.88	Sep 11	0415	3,720	74.31

SAN JACINTO RIVER BASIN

08075000 BRAYS BAYOU AT HOUSTON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1936 - 1998	
ANNUAL TOTAL	153165		118261		163	
ANNUAL MEAN	420		324		430	
HIGHEST ANNUAL MEAN					15.1	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	7240	Mar 12	13600	Sep 11	16300	Oct 18 1994
LOWEST DAILY MEAN	101	Aug 15	100	Sep 5	.10	Oct 11 1937
ANNUAL SEVEN-DAY MINIMUM	105	Aug 12	106	Jun 19	.19	Oct 6 1937
INSTANTANEOUS PEAK FLOW			25500	Sep 11	29000	Jun 15 1976
INSTANTANEOUS PEAK STAGE			50.21	Sep 11	52.13	Jun 15 1976
ANNUAL RUNOFF (AC-FT)	303800		234600		117800	
10 PERCENT EXCEEDS	885		538		290	
50 PERCENT EXCEEDS	149		128		63	
90 PERCENT EXCEEDS	108		107		5.6	



08075000 BRAYS BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: Oct 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	BOD OXYGEN DEMAND, BIOCHEM, CARBON. 5 DAY (MG/L) (80082)	
FEB 03...	1010	209	713	7.8	16.0	21	17	9.5	97	3.0	2.4	
MAY 19...	0955	94	840	8.0	26.0	15	8.0	10.6	131	2.9	2.0	
AUG 12...	1000	141	732	8.2	30.0	17	1.2	9.0	119	3.0	1.9	
DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS-FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 03...	2000	1000	160	49	9.3	72	2	6.2	170	49	71	
MAY 19...	2000	160	170	51	9.6	105	4	9.0	200	59	97	
AUG 12...	2200	320	140	44	7.8	85	3	8.1	170	47	84	
DATE	TIME	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON-FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 03...	.49	15	401	5	3	2	3.94	.903	4.84	1.51	.77	
MAY 19...	.60	20	503	<1	4	--	6.49	.648	7.13	.185	.79	
AUG 12...	.53	19	422	27	8	19	4.33	.379	4.71	.443	.76	
DATE	TIME	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (MG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
FEB 03...	2.3	.596	.519	1.6	6.5	2	83	<1.0	<8.0	<14	<12	
MAY 19...	.97	.987	1.00	3.1	7.0	2	88	<1.0	<8.0	<14	<12	
AUG 12...	1.2	.630	.597	1.8	7.4	3	93	<1.0	<8.0	<14	<12	
DATE	TIME	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
FEB 03...	<10	17	<100	12	22	.2	<60	<40	<1	<4.0	352	
MAY 19...	<10	12	<100	16	16	<.1	<60	<40	<1	<4.0	450	
AUG 12...	<10	<10	<100	17	8.5	<.1	<60	<40	1	<4.0	400	

SAN JACINTO RIVER BASIN

08075000 BRAYS BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

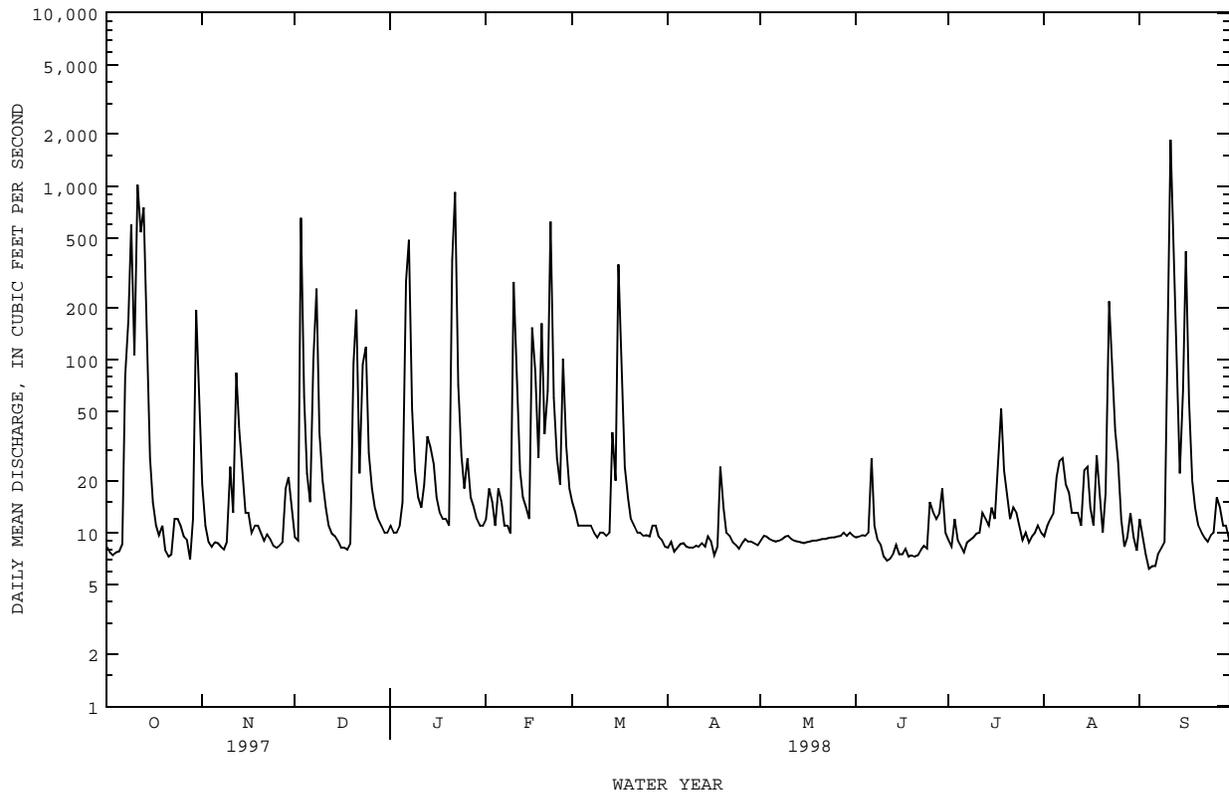
DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNPLTRD REC (UG/L) (39630)	CYAN- AZINE TOTAL (UG/L) (81757)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PRO- PAZINE TOTAL (UG/L) (39024)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)
FEB 03...	<10	35	--	--	--	--	--	--	--	--
MAY 19...	<10	<20	<.100	.190	<.200	<.200	<.100	<.100	<.100	<.100
AUG 12...	<10	22	<.100	.100	<.200	<.200	<.100	<.100	<.100	<.100

SAN JACINTO RIVER BASIN

08075400 SIMS BAYOU AT HIRAM CLARKE STREET, HOUSTON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998h	
ANNUAL TOTAL	24009.9		16655.1		31.7	
ANNUAL MEAN	65.8		45.6		57.8	
HIGHEST ANNUAL MEAN					10.7	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	1470	Mar 12	1850	Sep 11	5640	Oct 18 1994
LOWEST DAILY MEAN	5.9	Aug 15	6.2	Sep 4	1.5	Jul 26 1965
ANNUAL SEVEN-DAY MINIMUM	6.7	Aug 25	7.3	Sep 3	2.2	Jul 22 1965
INSTANTANEOUS PEAK FLOW			3000	Sep 11	7510	Oct 18 1994
INSTANTANEOUS PEAK STAGE			50.32	Sep 11	57.12	Jun 15 1976
ANNUAL RUNOFF (AC-FT)	47620		33040		22940	
10 PERCENT EXCEEDS	135		67		52	
50 PERCENT EXCEEDS	13		11		12	
90 PERCENT EXCEEDS	7.2		8.2		6.1	

e Estimated
h See PERIOD OF RECORD paragraph.



08075500 SIMS BAYOU AT HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°40'27", long 95°17'21", Harris County, Hydrologic Unit 12040104, on left bank State Highway 35 in southeast Houston and 7.0 mi upstream from mouth.

DRAINAGE AREA.--63.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1952 to Sep 1995. Oct 1995 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WSP 1922: 1960. 1975(M). WDR TX-77-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3.09 ft below sea level, 1973 adjustment; unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. Major channel rectification completed late in the 1997 Water Year. No known regulation or diversions. Low flow is largely sustained by wastewater effluent from Houston suburbs and from industrial wastes. Stage-discharge relationship is tidally affected at low flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 8	1445	2,830	10.14	Jan 22	0045	7,040	15.72
Oct 11	1845	3,620	11.33	Mar 16	1115	2,930	10.30
Dec 3	1015	2,740	10.01	Sep 11	1000	10,000	18.91

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: Oct 1968 to current year.

PERIOD OF DAILY RECORD.--Specific conductance: Jul 1993 to Sep 1997. Water temperature: Jul 1993 to Sep 1997. Dissolved oxygen: Jul 1993 to Sep 1997.

INSTRUMENTATION.--Since Jul 1993 to Sep 1997, a water-quality monitoring system continuously recorded specific conductance, water temperature, and dissolved oxygen at this station.

REMARKS.--Interruption in record was due to malfunctions of the instrumentation. Due to low flow wastewater effluent from Houston suburbs, industrial wastes, probe location, and channel morphology, the water quality collected at this location may not be representative of the entire flow through the cross-section.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 4,250 microsiemens, Aug 16, 1997; minimum, 80 microsiemens, Oct 18, 1994, Sep 20, 1995.
 WATER TEMPERATURE: Maximum, 34.5°C, Jul 27, 28, 1995; minimum, 6.0°C, Jan 13, 1997.
 DISSOLVED OXYGEN: Maximum, 16.6 mg/L, Jun 15, 1997; minimum, 1.0 mg/L, Jul 20, 1995.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	BOD OXYGEN DEMAND, BIOCHEM CARBON, 5 DAY (MG/L) (80082)		
FEB 03...	0830	259	1420	7.8	16.0	20	14	9.0	92	2.5	1.6	
MAY 19...	0819	283	1970	7.5	26.0	19	15	4.6	57	7.0	2.0	
AUG 12...	0810	324	1360	7.6	30.0	20	28	5.2	69	1.9	1.3	
DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, KF AGAR (COLS./100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY, WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB 03...	1100	750	240	50	72	16	189	5	6.5	200	230	
MAY 19...	370	160	250	69	75	15	309	9	10	180	440	
AUG 12...	190	80	170	17	53	9.6	199	7	7.7	160	240	
DATE	TIME	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE NON-FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
FEB 03...	160	.61	12	827	23	4	19	4.58	.125	4.71	.504	
MAY 19...	230	.70	11	1220	2	7	.00	2.51	1.05	3.55	1.99	
AUG 12...	160	.68	11	800	67	6	61	4.83	.226	5.06	.898	
DATE	TIME	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)
FEB 03...	.73	1.2	.365	.342	1.0	8.0	2	187	<1.0	<8.0	<14	
MAY 19...	.64	2.6	.626	.626	1.9	10	2	202	<1.0	<8.0	<14	
AUG 12...	.83	1.7	.400	.382	1.2	6.8	2	135	<1.0	<8.0	<14	

08075500 SIMS BAYOU AT HOUSTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)
FEB 03...	<12	<10	11	<100	12	58	<.1	<60	<40	<1	<4.0
MAY 19...	<12	<10	<10	<100	17	50	<.1	<60	<40	<1	<4.0
AUG 12...	<12	<10	<10	<100	14	29	<.1	<60	<40	<1	<4.0

DATE	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CYAN- AZINE TOTAL (UG/L) (81757)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PRO- PAZINE TOTAL (UG/L) (39024)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)
FEB 03...	487	<10	24	<.100	.160	<.200	<.200	<.100	<.100	.130	<.100
MAY 19...	583	<10	<20	<.100	.290	<.200	<.200	<.100	<.100	.100	<.100
AUG 12...	461	<10	<20	<.100	.210	<.200	<.200	<.100	<.100	<.100	<.100

SAN JACINTO RIVER BASIN

08075650 BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TX

LOCATION.--Lat 29°40'35", long 95°14'37", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of bridge at Forest Oaks Street in southeast Houston, 0.8 mi upstream from mouth of Berry Creek, and 1.7 mi upstream from Sims Bayou.

DRAINAGE AREA.--10.7 mi².

PERIOD OF RECORD.--Apr 1964 to Sep 1966, daily mean discharge. Oct 1967 to Sep 1982, daily mean discharge greater than base discharge or flood-hydrograph partial-record station. Oct 1982 to current year, gage heights only.

Water-quality records.--Chemical, biochemical, and pesticide analyses: Oct 1968 to Sep 1981. Water Temperature: Apr 1964 to Sep 1981.

REVISED RECORDS.--WDR TX-80-2: 1979(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2.72 ft below sea level, 1973 adjustment. Jun 1964 to Jan 1965, auxiliary nonrecording gage 0.8 mi downstream at same datum. Jan 1965 to Sep 1982, auxiliary water-stage recorder 0.8 mi downstream at same datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records poor. No known regulation or diversions. Low stages are affected by tides. Rises are occasionally affected by backwater from Sims Bayou. The reports "Hydrologic Data for Urban Studies in the Houston, Texas Metropolitan area", for water years 1965-84, contain additional storm runoff data for this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s Jun 9, 1975; maximum gage height, 23.85 ft Sep 20, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 18.76 ft, Sep 11; minimum gage height, 3.42 ft, Jul 12.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.61	3.63	5.22	3.70	4.75	3.68	4.84	3.70	6.24	4.29	4.89	3.78
2	5.11	3.96	4.29	3.64	5.22	3.88	4.90	3.70	5.23	3.92	4.75	3.73
3	5.30	3.97	4.31	3.61	10.11	4.23	4.94	3.78	4.61	3.73	4.71	3.73
4	5.39	4.32	4.79	3.63	4.57	3.83	5.38	4.53	5.38	3.63	5.52	3.80
5	5.87	4.48	6.07	4.05	4.10	3.75	5.67	4.17	5.46	3.70	5.58	3.88
6	5.60	4.50	5.27	3.66	4.45	3.72	10.48	4.34	4.83	3.64	5.38	3.79
7	8.52	5.37	4.24	3.65	14.01	3.79	8.39	4.15	4.27	3.64	5.86	4.01
8	10.04	5.78	4.70	3.66	11.75	4.01	4.15	3.92	4.83	3.66	5.84	3.74
9	7.39	5.20	4.98	3.82	4.80	3.77	5.02	3.74	5.31	3.73	3.78	3.75
10	6.79	5.27	5.13	3.72	4.40	3.64	5.15	3.77	5.70	4.55	4.19	3.74
11	10.79	5.30	4.83	3.65	4.03	3.71	5.12	3.76	5.30	3.99	4.93	3.67
12	7.59	5.99	5.75	4.36	3.85	3.68	5.10	3.78	4.73	3.81	5.07	3.82
13	8.81	4.63	5.00	3.92	4.22	3.67	6.17	4.52	5.22	3.77	5.33	4.31
14	5.10	3.95	4.78	3.71	4.14	3.66	5.79	4.24	5.80	4.31	5.21	4.20
15	5.86	4.11	4.29	3.64	4.24	3.68	5.61	3.86	6.41	5.55	5.74	4.37
16	5.67	4.07	4.43	3.66	4.31	3.68	4.57	3.79	6.40	4.83	13.07	5.21
17	5.64	3.83	4.84	3.68	4.21	3.69	4.57	3.71	6.04	3.78	5.57	4.51
18	5.60	3.97	4.97	3.79	4.28	3.66	4.61	3.71	5.39	3.65	5.74	4.17
19	5.57	3.82	5.07	3.73	4.31	3.61	4.70	3.66	5.39	4.15	5.75	4.10
20	5.41	3.65	4.93	3.72	9.15	4.08	5.69	3.98	4.75	3.87	4.10	3.79
21	5.17	3.62	5.15	3.70	9.18	4.08	15.60	4.41	9.32	3.79	4.58	3.80
22	4.82	3.63	4.73	3.72	4.94	3.95	16.32	4.41	12.94	4.16	4.95	3.71
23	6.26	3.82	4.73	3.70	6.11	4.65	4.91	4.04	4.74	3.93	5.08	3.70
24	5.86	3.84	5.27	4.11	5.35	4.05	4.90	3.81	5.16	3.86	5.23	3.72
25	5.41	3.81	5.02	3.87	4.81	3.83	5.54	3.82	5.56	4.13	5.48	3.96
26	4.65	3.60	5.09	3.78	5.08	3.74	5.66	4.00	6.13	4.44	5.70	4.09
27	4.57	3.60	5.33	3.70	3.86	3.70	4.63	3.77	5.45	3.94	6.35	4.97
28	5.43	4.21	5.81	4.24	4.31	3.68	5.08	3.72	5.84	4.10	5.63	4.38
29	5.85	4.40	5.35	3.79	3.87	3.66	5.23	3.74	---	---	6.11	4.52
30	5.72	4.33	4.92	3.67	3.80	3.65	5.11	3.75	---	---	7.14	5.07
31	5.43	3.85	---	---	3.98	3.64	5.86	4.14	---	---	6.85	4.57
MONTH	10.79	3.60	6.07	3.61	14.01	3.61	16.32	3.66	12.94	3.63	13.07	3.67

08075650 BERRY BAYOU AT FOREST OAKS STREET, HOUSTON, TX--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.56	3.72	5.53	3.85	5.04	3.47	5.00	3.70	---	---	6.23	4.39
2	5.89	4.06	5.54	3.71	5.36	3.93	5.35	3.90	---	---	6.73	4.98
3	5.30	3.76	5.46	4.08	5.56	4.03	6.40	4.43	---	---	6.37	4.86
4	4.93	3.59	5.26	3.80	5.66	4.27	5.58	3.85	---	---	6.42	4.63
5	5.44	3.65	5.57	4.36	5.63	3.70	5.13	3.75	---	---	6.75	4.86
6	6.19	4.49	5.59	4.71	4.80	3.69	4.89	3.52	---	---	6.34	4.77
7	5.60	4.18	5.41	4.43	5.78	3.59	4.87	3.47	---	---	7.40	4.89
8	5.47	4.09	5.87	4.13	6.41	4.45	4.91	3.46	---	---	7.13	5.82
9	4.63	3.64	6.16	4.45	6.28	4.69	4.92	3.48	---	---	---	---
10	4.49	3.54	4.79	3.78	6.00	4.23	4.72	3.44	---	---	---	---
11	5.47	3.61	5.58	3.61	6.19	4.61	4.55	3.46	---	---	18.76	---
12	6.29	4.53	6.14	4.30	5.64	3.71	4.64	3.42	5.11	3.89	---	5.88
13	6.07	4.75	6.20	4.47	5.20	3.46	---	3.47	5.01	3.76	7.31	5.52
14	5.43	3.82	6.46	4.85	4.86	3.45	---	3.48	5.77	3.80	7.92	5.64
15	5.86	4.19	6.17	4.83	4.91	3.47	4.59	3.50	5.30	3.86	7.32	5.55
16	5.91	4.27	5.69	3.91	5.19	3.46	4.52	3.50	5.26	3.87	7.18	5.46
17	5.25	3.64	5.56	3.67	5.84	4.45	4.65	3.51	5.35	3.92	6.73	5.29
18	5.46	3.67	---	3.68	5.59	4.43	4.57	3.57	5.30	3.92	6.52	5.17
19	5.09	3.68	5.30	---	5.55	3.85	4.62	3.51	5.34	3.79	6.66	5.06
20	5.56	3.64	5.42	3.83	5.29	3.64	4.68	3.48	6.01	3.80	6.20	5.20
21	4.86	3.63	5.37	4.21	5.33	3.50	4.83	3.44	7.02	4.19	5.94	4.68
22	4.51	3.55	5.32	4.11	5.15	3.55	4.85	3.48	7.89	5.74	5.74	4.41
23	4.69	3.61	5.49	3.85	5.25	3.47	5.02	3.47	6.52	5.06	5.57	4.19
24	4.95	3.66	5.45	3.75	5.18	3.46	4.85	3.45	6.01	4.57	5.68	4.59
25	5.97	4.22	5.60	3.72	5.89	3.49	5.01	3.45	5.77	4.53	6.28	5.08
26	6.42	4.16	5.76	3.79	5.77	4.08	4.81	3.44	5.79	4.54	7.01	5.19
27	5.78	4.17	6.02	3.60	6.49	4.02	4.80	3.44	5.25	4.09	6.18	4.28
28	5.14	3.64	5.60	3.48	7.72	4.13	4.81	3.55	5.07	3.90	5.94	4.74
29	6.07	3.64	5.48	3.53	5.57	4.44	4.83	3.79	5.04	3.92	6.28	3.99
30	5.93	4.16	5.39	3.44	5.31	4.03	---	---	5.58	3.83	5.21	3.93
31	---	---	5.29	3.43	---	---	---	---	5.82	3.91	---	---
MONTH	6.42	3.54	---	---	7.72	3.45	---	---	---	---	---	---

SAN JACINTO RIVER BASIN

08075730 VINCE BAYOU AT PASADENA, TX

LOCATION.--Lat 29°41'40", long 95°12'58", Harris County, Hydrologic Unit 12040104, on right bank of concrete-lined channel at end of West Ellaine Avenue in Pasadena and 2.4 mi upstream from mouth.

DRAINAGE AREA.--8.26 mi², revised.

PERIOD OF RECORDS.--Oct 1971 to current year.

Water-quality records.--Chemical, biochemical, and pesticide analyses: May 1971 to Sep 1973 and Oct 1976 to Jul 1979.

GAGE.--Water-stage recorder. Datum of gage is 2.54 ft below sea level, 1973 adjustment; unadjusted for land-surface subsidence (levels by the U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 22	0015	2,310	15.36	Sep 11	0230	2,620	15.87
Feb 10	1330	1,780	14.41	Sep 11	0445	3,860	17.66

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.4	1.1	2.7	3.2	1.9	1.5	2.8	.90	1.7	.99	6.3
2	1.2	1.2	2.8	3.3	3.0	1.6	2.7	2.0	.65	1.5	1.1	2.3
3	1.3	1.2	143	4.0	3.8	1.5	1.9	2.0	1.8	14	.98	1.8
4	1.8	3.0	4.7	82	1.8	3.0	4.1	1.9	1.0	2.0	.94	1.9
5	1.8	8.9	3.2	24	3.2	2.0	4.8	3.5	.86	.83	1.1	1.7
6	2.3	1.9	1.5	410	3.0	1.7	3.0	1.7	17	.90	1.8	51
7	162	1.8	106	77	1.3	2.1	4.0	1.7	1.2	1.9	2.5	3.8
8	131	1.3	96	6.8	1.2	1.8	2.1	1.7	.65	1.1	1.9	1.5
9	39	1.1	9.8	3.0	1.8	1.1	2.4	1.7	.79	1.0	1.3	4.1
10	63	7.9	6.7	3.3	234	2.7	2.9	1.7	.77	1.1	1.1	88
11	260	2.1	5.6	1.8	13	1.7	2.6	1.5	.97	1.1	1.8	1320
12	46	49	4.7	1.8	3.4	1.1	2.7	2.0	.85	1.3	1.8	102
13	130	7.2	2.9	52	1.8	1.4	2.7	2.0	1.4	1.0	1.8	7.8
14	11	2.5	2.2	15	2.1	6.0	5.6	2.1	1.0	3.9	42	98
15	4.8	2.8	2.1	3.4	1.7	1.4	3.5	1.3	.86	2.9	2.8	21
16	4.1	1.7	2.9	3.2	58	212	5.1	1.2	1.7	1.3	1.8	30
17	3.8	1.5	3.4	2.2	6.0	12	3.3	1.2	1.1	51	11	4.4
18	2.0	4.1	2.5	1.6	2.8	3.6	17	1.4	1.0	7.9	2.6	4.8
19	1.8	2.6	2.2	1.4	32	4.1	2.0	1.4	.84	1.1	2.5	5.2
20	2.3	2.0	63	1.6	4.2	2.8	1.1	1.3	1.7	.88	2.0	4.6
21	4.8	2.7	88	323	28	1.7	1.7	2.1	1.3	1.5	16	5.9
22	3.9	2.2	5.0	373	110	1.6	1.7	2.5	.96	1.0	57	6.4
23	18	1.6	46	7.9	4.6	1.4	3.0	1.2	1.8	1.3	4.5	6.0
24	2.4	1.2	27	3.3	4.5	1.5	2.5	1.2	1.1	1.2	1.6	6.9
25	2.2	1.2	4.4	2.4	3.4	2.5	1.8	1.2	1.3	1.1	2.2	5.3
26	2.2	2.8	3.9	10	70	1.2	2.3	.91	2.0	1.4	1.8	12
27	1.7	2.0	3.8	2.5	4.7	1.6	1.8	1.4	4.5	1.2	1.5	5.6
28	3.5	24	2.9	2.8	2.7	1.3	2.7	2.2	24	2.3	1.4	2.4
29	16	3.5	3.3	2.0	---	1.2	2.9	1.9	31	1.0	1.3	2.7
30	8.2	1.2	4.6	2.3	---	1.8	1.9	1.5	1.5	1.1	1.7	2.5
31	2.7	---	4.3	1.7	---	2.6	---	1.3	---	.95	2.0	---
TOTAL	936.9	147.6	659.5	1431.0	609.2	283.9	97.3	53.51	106.50	112.46	174.81	1815.9
MEAN	30.2	4.92	21.3	46.2	21.8	9.16	3.24	1.73	3.55	3.63	5.64	60.5
MAX	260	49	143	410	234	212	17	3.5	31	51	57	1320
MIN	1.2	1.1	1.1	1.4	1.2	1.1	1.1	.91	.65	.83	.94	1.5
AC-FT	1860	293	1310	2840	1210	563	193	106	211	223	347	3600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1998, BY WATER YEAR (WY)

MEAN	14.8	15.0	13.3	19.6	13.9	11.7	13.2	17.5	26.3	14.0	12.7	20.2
MAX	87.4	41.1	35.0	57.7	40.3	36.8	57.6	49.8	87.0	87.4	78.1	113
(WY)	1995	1987	1972	1980	1992	1979	1991	1981	1989	1979	1983	1979
MIN	.64	1.71	1.49	1.82	1.67	.59	.38	.90	1.81	1.66	1.31	1.04
(WY)	1979	1981	1989	1996	1988	1996	1983	1988	1990	1982	1980	1982

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1972 - 1998

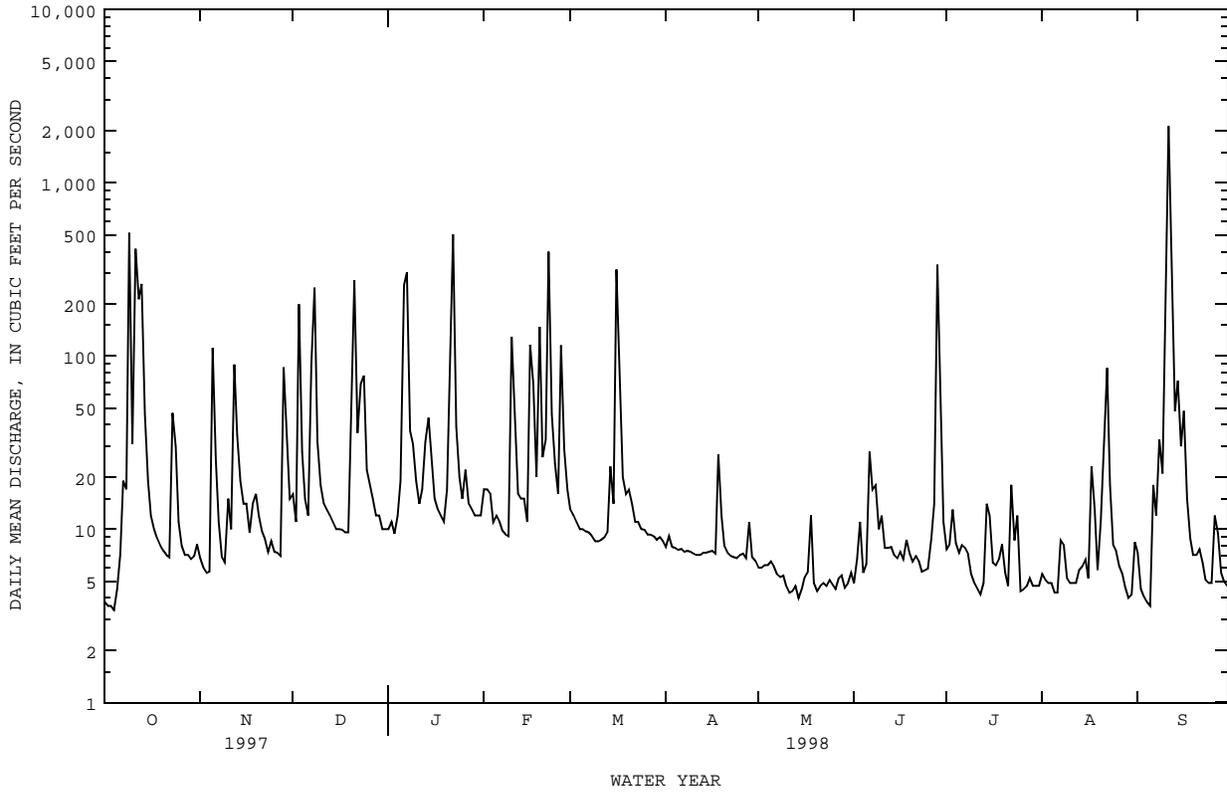
ANNUAL TOTAL	7467.70	6428.58	
ANNUAL MEAN	20.5	17.6	16.0
HIGHEST ANNUAL MEAN			32.1
LOWEST ANNUAL MEAN			4.97
HIGHEST DAILY MEAN	755	Apr 25	1320
LOWEST DAILY MEAN	.52	Aug 4	.65
ANNUAL SEVEN-DAY MINIMUM	.83	Sep 12	.92
INSTANTANEOUS PEAK FLOW			3860
INSTANTANEOUS PEAK STAGE			17.66
ANNUAL RUNOFF (AC-FT)	14810	12750	11610
10 PERCENT EXCEEDS	46	29	26
50 PERCENT EXCEEDS	2.9	2.2	2.2
90 PERCENT EXCEEDS	1.1	1.1	.50

SAN JACINTO RIVER BASIN

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	13098.6		12135.5		25.0	
ANNUAL MEAN	35.9		33.2		45.2	
HIGHEST ANNUAL MEAN					6.97	
LOWEST ANNUAL MEAN					1979	
HIGHEST DAILY MEAN	740	May 24	2120	Sep 11	2730	Oct 18 1994
LOWEST DAILY MEAN	2.4	Aug 6	3.4	Oct 4	.88	Aug 24 1971
ANNUAL SEVEN-DAY MINIMUM	2.8	Aug 16	4.6	May 10	1.0	Jul 2 1965
INSTANTANEOUS PEAK FLOW			3130	Sep 11	3470	Jun 26 1989
INSTANTANEOUS PEAK STAGE			38.90	Sep 11	39.91	Jun 26 1989
ANNUAL RUNOFF (AC-FT)	25980		24070		18150	
10 PERCENT EXCEEDS	73		47		39	
50 PERCENT EXCEEDS	11		9.1		7.0	
90 PERCENT EXCEEDS	3.5		4.9		3.2	

e Estimated



08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: Oct 1968 to current year.

INSTRUMENTATION.--Stage-activated water sampler from Jul 1983 to Sep 1988 provided water-quality samples over selected runoff events.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	BOD OXYGEN DEMAND, 5 DAY (MG/L) (80082)		
FEB 02...	1030	14	728	7.7	15.0	14	15	7.2	72	6.4	3.6	
MAY 18...	0920	5.9	698	7.7	24.0	17	10	5.6	66	2.8	1.8	
AUG 11...	0930	4.5	610	7.4	29.0	16	1.4	4.8	62	3.0	2.6	
DATE	TIME	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS./100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARBONIC (MG/L AS CACO3) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY, WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
FEB 02...	3800	1800	240	--	73	14	72	2	3.6	250	72	
MAY 18...	170	190	180	19	56	9.3	67	2	5.6	160	63	
AUG 11...	580	1900	130	3	40	5.9	66	3	6.1	120	49	
DATE	TIME	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON-FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
FEB 02...	59	.75	14	468	18	4	14	.556	.163	.719	1.84	
MAY 18...	69	.85	7.6	394	2	6	.00	3.58	.173	3.75	.452	
AUG 11...	67	.90	9.1	342	14	6	8	4.63	.203	4.83	.252	
DATE	TIME	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)
FEB 02...	.69	2.5	.262	.243	.75	7.7	2	135	<1.0	<8.0	<14	
MAY 18...	.58	1.0	.377	.391	1.2	8.8	2	92	<1.0	<8.0	<14	
AUG 11...	.58	.83	.551	.538	1.6	8.9	4	84	<1.0	<8.0	<14	
DATE	TIME	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
FEB 02...	<12	<10	26	<100	11	172	<.1	<60	<40	<1	<4.0	
MAY 18...	<12	<10	22	<100	11	109	<.1	<60	<40	<1	<4.0	
AUG 11...	<12	<10	11	<100	9	50	<.1	<60	<40	<1	<4.0	

SAN JACINTO RIVER BASIN

08075770 HUNTING BAYOU AT INTERSTATE HIGHWAY 610, HOUSTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)	CYAN- AZINE TOTAL (UG/L) (81757)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PRO- PAZINE TOTAL (UG/L) (39024)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)
FEB 02...	425	<10	42	<.100	.110	<.200	<.200	<.100	<.100	.100	<.100
MAY 18...	357	<10	<20	<.100	.350	<.200	<.200	<.100	<.100	.110	<.100
AUG 11...	267	<10	25	<.100	.230	<.200	<.200	<.100	<.100	<.100	<.100

08075900 GREENS BAYOU NEAR U.S. HIGHWAY 75 NEAR HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°57'24", long 95°25'04", Harris County, Hydrologic Unit 12040104, on right bank at upstream side of bridge on Knobcrest Street, 600 ft downstream from Interstate Highway 45 access road bridge, 8.9 mi upstream from station 08076000, and 20.9 mi upstream from Halls Bayou.

DRAINAGE AREA.--36.6 mi².

PERIOD OF RECORD.--Aug 1965 to Sep 1980 and Mar 27, 1981 to Sep 1992 (daily mean discharge). Oct 1, 1980 to Mar 26, 1981 (discharge measurements and supplemental peak discharges only). Oct 1992 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WDR TX-76-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is sea level; unadjusted for land-surface subsidence. Prior to Jul 19, 1989, water-stage recorder at site 600 ft upstream at present datum. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. No known regulation or diversions.

AVERAGE DISCHARGE.--26 years (water year 1966-80, 1982-1992), 40.5 ft³/s (29,370 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s Jun 26, 1989 (elevation, 90.20 ft from peak mark at former site); maximum elevation, 91.09 ft Feb 21, 1969 at former site, occurred prior to 1980-81 channel rectification; minimum daily discharge, 0.16 ft³/s Oct 21, 22, 1969.

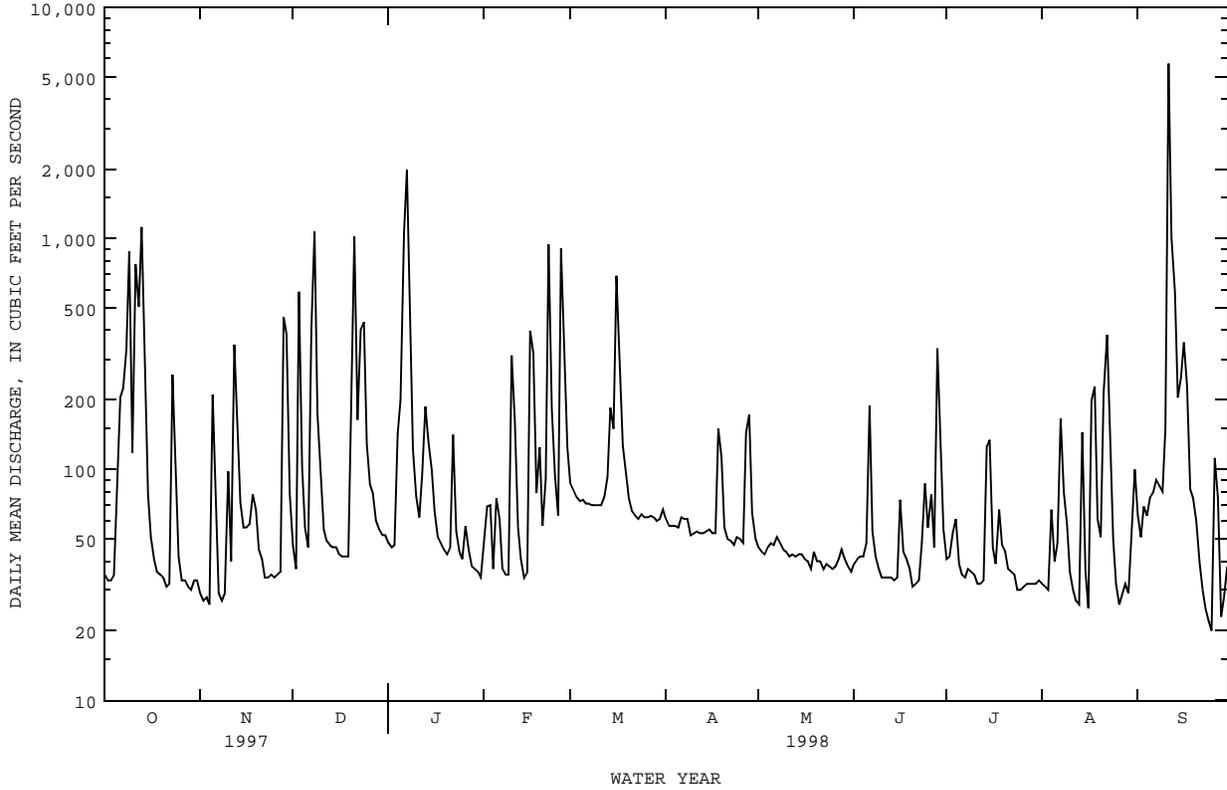
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 13	1000	2,440	78.17	Jan 6	2145	6,970	84.28
Nov 28	1800	2,430	78.15	Feb 26	0800	1,930	77.21
Dec 7	2230	2,570	78.39	Sep 11	0700	6,990	84.30
Dec 21	0015	2,010	77.37				

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1953 - 1998	
ANNUAL TOTAL	69070		46505		77.5	
ANNUAL MEAN	189		127		180	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					6.82	
HIGHEST DAILY MEAN	4150	Mar 12	5710	Sep 11	10700	May 18 1989
LOWEST DAILY MEAN	26	Nov 4	20	Sep 25	.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	29	Oct 29	29	Oct 29	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW			11800	Sep 11	16500	Jun 27 1989
INSTANTANEOUS PEAK STAGE			63.04	Sep 11	66.04	Jun 27 1989
ANNUAL RUNOFF (AC-FT)	137000		92240		56150	
10 PERCENT EXCEEDS	486		229		139	
50 PERCENT EXCEEDS	63		52		23	
90 PERCENT EXCEEDS	35		32		2.0	

e Estimated



SAN JACINTO RIVER BASIN

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical, biochemical, and pesticide analyses: Oct 1968 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	BOD OXYGEN DEMAND, BIOCHEM, CARBON. 5 DAY (MG/L) (80082)
FEB 02...	0845	76	780	7.9	15.0	15	8.4	7.8	78	2.2	1.5
MAY 18...	0755	13	820	8.1	26.0	13	14	6.2	76	2.5	2.0
AUG 11...	0800	30	700	7.7	30.0	25	7.5	5.2	69	1.6	1.0
DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
FEB 02...	500	190	180	58	8.7	81	3	5.7	200	34	81
MAY 18...	370	48	160	51	7.6	101	3	7.0	200	44	97
AUG 11...	980	180	130	42	5.6	86	3	7.1	160	46	77
DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON-FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
FEB 02...	.47	19	440	6	2	4	5.36	.128	5.49	.206	.48
MAY 18...	.51	23	479	16	6	10	4.98	.142	5.12	.112	.54
AUG 11...	.43	23	403	27	5	22	3.89	.094	3.98	.119	.47
DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (MG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)
FEB 02...	.68	1.45	1.39	4.3	5.1	4	264	<1.0	<8.0	<14	<12
MAY 18...	.65	2.01	1.91	5.9	5.0	7	240	<1.0	<8.0	<14	<12
AUG 11...	.58	1.47	1.41	4.3	5.2	6	215	<1.0	<8.0	<14	<12
DATE	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
FEB 02...	<10	<10	<100	16	20	<.1	<60	<40	<1	<4.0	359
MAY 18...	<10	<10	<100	20	17	<.1	<60	<40	<1	<4.0	388
AUG 11...	<10	<10	<100	17	5.8	<.1	<60	<40	<1	<4.0	328

SAN JACINTO RIVER BASIN

137

08076000 GREENS BAYOU NEAR HOUSTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNPLTRD REC (UG/L) (39630)	CYAN- AZINE TOTAL (UG/L) (81757)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PRO- PAZINE TOTAL (UG/L) (39024)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)
FEB 02...	<10	35	<.100	<.100	<.200	<.200	<.100	<.100	.120	<.100
MAY 18...	<10	<20	<.100	.130	<.200	<.200	<.100	<.100	<.100	<.100
AUG 11...	<10	<20	<.100	<.100	<.200	<.200	<.100	<.100	<.100	<.100

SAN JACINTO RIVER BASIN

08076180 GARNERS BAYOU NR HUMBLE, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°56'03", long 95°14'02", Harris County, Hydrologic Unit 12040104, on left bank at downstream side of upstream bridge on Beltway 8, 0.2 mi downstream from Williams Gully, 1.2 mi upstream from Greens Bayou, and 4.5 mi southeast of Humble.

DRAINAGE AREA.--31.0 mi².

PERIOD OF RECORD.--Feb 1986 to Sep 1993 (daily mean discharge); Oct 1993 to current year (peaks above base discharge).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is sea level, 1978 adjustment, levels furnished by Harris County Flood Control District. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Low flow is sustained by wastewater effluent from Humble suburbs. Minor channel rectification made in 1988.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 21	0300	1,260	47.95	Feb 22	0400	1,660	50.18
Jan 7	0200	1,690	50.32	Sep 11	1300	2,810	53.34

08076500 HALLS BAYOU AT HOUSTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°51'42", long 95°20'05", Harris County, Hydrologic Unit 12040104, on right bank, at downstream side of bridge on Jensen Drive in northeast section of Houston, and 11.0 mi upstream from mouth.

DRAINAGE AREA.--28.7 mi². Oct 1, 1973, to Sep 30, 1977, 28.3 mi². Oct 1, 1977 to Sep 30, 1988, 27.6 mi². Prior to Oct 1, 1973, 24.7 mi². Changes were the result of drainage ditch extensions or relocations.

PERIOD OF RECORD.--Oct 1952 to Sep 1993 (daily mean discharge); Oct 1993 to current year (peak discharges greater than base discharge).

Water-quality records.--Chemical, biochemical, and pesticide analyses: Oct 1968 to Sep 1984.

REVISED RECORDS.--WSP 1732: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.66 ft below sea level, 1957 adjustment; records unadjusted for land-surface subsidence. Radio telemetry at station. Satellite telemeter at station.

REMARKS--Records fair. No known regulation or diversions. Stage-discharge relationship is affected by seasonal vegetal growth during most years. Low flow is sustained by wastewater effluent from Houston suburbs.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 6	2400	2,370	56.97	Sep 11	1045	3,570	60.23
Feb 22	0215	2,110	56.39				

CLEAR CREEK BASIN

141

08077600 CLEAR CREEK NEAR FRIENDSWOOD TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 29°31'02", long 95°10'42", Harris-Galveston County line, Hydrologic Unit 12040204, on right bank at right downstream side of bridge on Farm Road 528 near Friendswood.

DRAINAGE AREA.--122 mi².

PERIOD OF RECORD.--Oct 1965 to Jul 1994 (annual maximum). Oct 1997 to current (peaks above base).

GAGE.--Water-stage recorder. Datum of gage is sea level. Radio telemeter at station. Satellite telemeter at station.

REMARKS.--Records good. No known regulation or diversions.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 8	2345	3,230	0.00	Jan 22	1345	2,920	0.00
Oct 12	0215	4,440	0.00	Feb 11	0015	2,210	0.00
Dec 8	0700	4,620	0.00	Mar 16	2100	4,030	0.00
Jan 4	2000	4,700	0.00	Sep 11	1445	7,500	0.00
Jan 7	0230	4,480	0.00	Sep 14	1130	2,570	0.00

08077650 MOSES LAKE-GALVESTON BAY NEAR TEXAS CITY, TX

LOCATION.--Lat 29°26'50", long 94°55'12", Galveston County, Hydrologic Unit 12040204, on right side of gate abutment of Texas City Flood Control Dike, one orifice located upstream and one downstream, at mouth of Moses Lake, and 4.5 mi north of Texas City.

DRAINAGE AREA.--Not determinable.

PERIOD OF RECORD.--May 1967 to current year. Maximum and minimum elevations for Galveston Bay and maximum elevation for Moses Lake.

GAGE.--Water-stage recorders. Datum of gage is sea level (levels by county engineer, Galveston County), 1978 adjustment. Prior to May 19, 1983, datum of gage was 0.49 ft below sea level, 1973 adjustment. Prior records unadjusted for land-surface subsidence. Satellite telemeter at station.

REMARKS.--Records good. Moses Lake is connected to Galveston Bay by gated opening through levee. These gates are open during periods of normal tide and are closed during periods of high tide and hurricane surge.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation (Moses Lake), 4.8 ft Sep 11, 1998; minimum, -4.2 ft Feb 28, 1983. Maximum elevation (Galveston Bay), about 10.0 ft (Hurricane Alicia) Aug 18, 1983; minimum, about -4.2 ft Feb 28, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 8.0 ft, Jun 22; minimum elevation, -5.0 ft, Jan 11-13.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY
	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN
1	.4	.3	-.2	1.1	1.1	.2	.3	.8	-.8	.2	.5	-.5
2	.9	.8	.2	.5	.6	-.6	1.0	1.4	.1	.7	.8	-.4
3	.9	.9	.2	.3	.4	-1.3	1.6	1.8	-.3	.6	.8	.0
4	1.1	1.2	.2	.0	.6	-.9	.5	.6	-1.3	1.1	1.0	.5
5	1.4	1.3	.3	1.3	1.5	.2	.1	.3	-1.0	1.1	---	---
6	1.6	1.5	.5	1.1	1.3	-.8	.4	.5	-.7	1.5	---	---
7	2.0	2.0	.9	.3	.4	-.8	1.6	2.3	.3	1.4	---	---
8	2.4	2.3	1.3	.6	.8	-.3	2.0	2.3	.0	-.6	---	---
9	1.9	2.6	1.1	.7	.8	.3	.8	1.0	.1	---	---	---
10	1.8	2.6	1.5	1.0	1.2	.1	.8	.9	-.5	---	---	---
11	2.3	2.8	1.9	.7	.9	-.1	.2	.3	-1.0	---	---	---
12	2.4	3.0	1.7	1.4	1.5	.8	.0	.0	-1.3	---	---	---
13	2.7	2.6	.4	1.1	1.2	.2	-.1	.2	-1.3	---	---	---
14	1.3	.6	-2.2	.8	.8	-.5	.0	.2	-1.7	---	---	---
15	1.4	.8	-.8	.8	.8	-.7	-.2	.2	-1.2	---	---	---
16	.5	.1	-1.0	.3	.6	-1.0	.2	.3	-1.1	---	---	---
17	.9	.6	-1.8	.8	1.0	-.3	.2	.2	-1.1	---	---	---
18	.7	---	---	1.1	1.2	.2	.1	.2	-1.1	---	---	---
19	.5	---	---	1.1	1.2	-.5	.2	.3	-.8	---	---	---
20	.6	---	---	.9	1.1	.1	.7	1.0	.1	1.3	1.5	---
21	1.0	---	---	1.0	1.2	-.2	1.2	1.7	-.4	1.4	1.9	.6
22	.8	---	---	.7	.7	-.1	.8	1.1	-.1	1.8	2.0	.5
23	1.3	---	---	.7	.9	.1	1.2	1.5	.5	.8	1.0	-.2
24	1.6	1.8	.1	1.0	1.1	.6	.8	.7	-.5	.8	.9	-.6
25	1.1	1.3	.5	1.0	1.2	.2	.7	.9	-.3	1.1	1.5	-.2
26	1.1	1.3	-.2	1.1	1.2	.1	.9	1.1	.1	1.5	1.6	.0
27	.5	.7	-.3	1.0	1.3	.0	.1	.1	-1.5	.6	.4	-1.3
28	1.1	1.3	.6	1.5	1.7	.5	.0	.1	-1.6	.6	.9	-.6
29	1.6	1.7	.8	1.5	1.5	-.2	-1.0	-1.2	-3.1	1.1	1.2	-.2
30	1.7	1.7	.7	.9	.9	-1.0	-1.0	-.6	-2.4	.8	.9	-.5
31	1.4	1.5	.2	---	---	---	-.5	-.2	-1.8	1.2	1.6	.4
MONTH	2.7	---	---	1.5	1.7	-1.3	2.0	2.3	-3.1	---	---	---

08077650 MOSES LAKE-GALVESTON BAY NEAR TEXAS CITY, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY
	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN
1	1.9	2.1	.9	.6	.6	.1	1.4	1.5	-.1	1.2	1.3	.2
2	1.4	1.5	.4	.4	.6	-.3	1.7	1.9	.6	1.0	1.1	.0
3	1.0	.8	.0	.4	.5	-.8	1.3	1.4	.3	1.1	1.2	.3
4	1.3	1.4	-.4	1.1	1.2	-.1	.8	1.0	-.4	.8	.9	-.2
5	1.3	1.4	.1	1.1	1.3	.2	1.3	1.4	.2	1.2	1.3	.6
6	1.0	1.0	-.7	1.3	1.4	-.1	1.6	1.8	.5	1.3	1.3	.8
7	.1	.2	-1.3	1.7	1.9	.3	1.6	1.7	.7	1.2	1.3	.4
8	.4	.9	-.9	1.7	1.8	-2.1	1.2	1.3	.7	1.5	1.5	.4
9	.8	1.0	-.3	-1.3	-.9	-2.7	.8	.8	-.3	1.8	2.0	.4
10	1.0	1.1	-.2	-.1	.2	-1.4	.3	.4	-.4	.7	.8	.0
11	.7	.7	-1.3	.4	.6	-.3	.9	1.1	-.1	1.2	1.4	-.3
12	.3	.7	-.6	.7	.8	.0	1.6	1.8	.5	1.6	1.6	.4
13	.7	.8	-.1	.9	1.0	.5	1.8	1.9	.6	1.9	2.0	.4
14	1.3	1.9	.5	.8	.9	.4	1.2	1.4	.3	2.0	2.1	.9
15	1.8	2.5	1.7	1.4	1.5	.6	1.6	1.7	.4	1.8	1.9	.6
16	1.7	1.8	.9	1.9	2.4	1.1	1.6	1.8	.5	1.2	1.3	.2
17	1.3	1.2	-.2	1.3	1.4	.6	1.4	1.6	.0	1.0	1.1	-.3
18	1.0	1.1	-.4	1.6	1.8	.7	1.4	1.5	.2	.9	1.0	-.3
19	1.0	1.1	-.1	1.5	1.6	.0	1.0	1.1	.1	1.1	1.2	.0
20	.6	.6	-.8	.5	.0	-1.0	1.2	1.4	.2	1.0	1.1	.4
21	1.6	1.9	-.2	.3	.5	-1.2	1.1	1.2	.0	1.0	1.1	.5
22	1.8	1.9	-.1	.6	.8	-.7	.4	.4	-.4	1.1	1.2	.3
23	.4	.7	-1.1	.7	.8	-.2	.2	.2	-.4	1.3	1.5	.1
24	.6	.8	-.6	.9	1.1	-.2	.3	.5	-.2	1.3	1.3	.0
25	1.3	1.5	.2	1.0	1.1	-.1	1.1	1.2	.0	1.4	1.5	-.1
26	1.6	1.8	.1	1.1	1.3	.3	1.5	1.6	.2	1.5	1.6	.0
27	1.0	1.1	.0	1.6	1.8	1.0	1.5	1.6	.4	1.5	1.6	.1
28	1.4	1.5	.5	1.1	1.3	.6	1.0	1.1	-.1	1.5	1.5	-.5
29	---	---	---	1.5	1.7	.9	2.0	2.1	-.2	1.3	1.3	.1
30	---	---	---	1.6	2.5	.8	1.8	1.7	.8	1.1	1.2	.0
31	---	---	---	1.8	2.0	.8	---	---	---	.8	.9	-.1
MONTH	1.9	2.5	-1.3	1.9	2.5	-2.7	2.0	2.1	-.4	2.0	2.1	-.5

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY	MOSES LAKE	GALV. BAY	GALV. BAY
	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN	MAX	MAX	MIN
1	.6	.7	-.1	.6	.7	.1	.4	.6	-.8	1.0	2.2	1.1
2	.8	.9	.2	.9	1.0	.3	.5	.6	-.6	1.1	2.7	1.2
3	1.0	1.2	.4	1.6	1.8	.5	1.1	1.3	-.1	1.8	2.4	.7
4	1.4	1.5	.6	1.4	1.5	.2	1.6	1.8	.0	2.2	2.4	1.0
5	1.2	1.4	.2	1.1	1.2	-.2	1.1	1.3	-.2	2.2	2.3	1.1
6	.9	1.0	.0	.8	.9	-.5	.9	1.0	-.2	1.9	2.1	1.0
7	1.3	1.3	.0	.7	.9	-.5	.9	1.2	-.1	2.3	2.8	1.2
8	1.7	2.3	.7	.8	.9	-.4	1.0	1.2	-.3	2.3	3.0	2.2
9	1.9	2.0	.3	.6	.9	-.5	.9	1.0	-.1	2.3	3.8	2.3
10	1.7	1.9	.4	.5	.6	-.6	.7	.9	-.1	3.2	5.3	3.7
11	1.8	2.0	.3	.3	.4	-.9	.6	.9	.0	4.8	5.5	3.3
12	1.4	1.5	.2	.2	.4	-.8	.7	.8	.1	3.9	3.9	1.7
13	.9	1.0	-.3	.2	.4	-.7	.6	.8	-.3	2.9	3.1	1.5
14	.5	.6	-.4	.1	.7	-.4	.5	.7	-.5	2.2	3.3	1.6
15	.5	.6	-.3	.1	.3	-.4	.8	1.0	-.4	2.0	2.9	1.7
16	.9	1.0	.0	.2	.4	-.5	.9	1.0	-.4	1.9	2.9	1.3
17	1.3	1.4	.4	.1	.3	-.9	.9	1.0	-.4	1.6	2.5	1.3
18	1.3	1.4	.6	.3	.5	-.9	.9	1.1	-.3	1.6	2.4	1.5
19	1.2	1.3	.1	.4	.6	-.8	1.0	1.1	-.1	1.6	2.4	1.5
20	1.1	1.2	-.2	.6	.8	-.6	1.4	1.6	.1	1.6	2.0	1.1
21	1.0	1.2	-.3	.7	.9	-.6	1.5	2.6	.4	1.5	1.6	1.0
22	.9	1.0	-.4	.7	.9	-.6	1.8	3.1	1.5	1.3	1.4	.7
23	1.0	1.1	-.4	.8	.8	-.5	1.9	2.0	1.2	1.2	1.4	.4
24	1.0	1.1	-.5	.6	1.0	-.4	1.5	1.7	.7	1.4	1.5	.8
25	1.5	1.6	-.3	.7	.8	-.3	1.3	1.5	.7	1.5	2.1	1.1
26	1.6	1.8	.6	.5	.6	-.3	1.4	1.5	.7	1.3	2.4	1.3
27	1.5	1.7	.4	.5	.6	-.3	1.0	1.2	.2	1.3	2.1	.6
28	1.6	1.9	.6	.4	.6	-.1	.7	.9	-.1	1.2	2.0	1.0
29	1.3	1.2	.4	.5	.6	.0	.8	1.0	.1	2.0	2.3	.3
30	1.0	1.2	.2	.5	.7	-.3	1.3	1.5	.2	1.0	1.2	.0
31	---	---	---	.6	.7	-.4	1.6	1.7	.6	---	---	---
MONTH	1.9	2.3	-.5	1.6	1.8	-.9	1.9	3.1	-.8	4.8	5.5	.0

08077690 HIGHLAND BAYOU DIVERSION CHANNEL NEAR HITCHCOCK, TX

LOCATION.--Lat 29°21'36", long 95°02'22", Galveston County line, Hydrologic Unit 12040204, on center of earthen dam approximately 3000 ft upstream from FM 2004 and 0.5 mi east of Hitchcock.

DRAINAGE AREA.--Not determinable.

PERIOD OF RECORD.--Mar 1997 to current (daily maximum).

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.25 ft at 0145 on Sep 11.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.16	1.63	1.28	.99	2.72	1.27	1.92	1.81	1.32	1.39	1.05	2.68
2	1.55	1.04	1.90	1.26	2.02	1.05	2.33	1.64	1.41	1.66	.96	3.17
3	1.62	.92	---	1.38	1.77	1.08	1.74	1.62	1.60	---	1.82	2.73
4	1.88	1.48	---	2.10	1.88	1.75	1.39	1.45	1.92	---	2.20	2.88
5	1.98	2.24	---	2.05	1.87	1.72	1.83	1.74	1.89	---	1.75	2.84
6	2.15	1.75	.84	3.16	1.59	1.86	2.22	1.85	1.46	1.30	1.65	2.55
7	2.75	1.06	2.18	3.12	.64	2.28	2.12	1.77	1.93	1.43	1.54	3.15
8	2.99	1.26	2.62	1.33	1.17	2.19	1.81	2.09	2.73	1.41	1.73	3.50
9	3.30	1.53	1.33	.97	1.43	.39	1.24	2.33	2.45	1.43	1.59	3.94
10	3.23	1.70	1.38	1.36	1.74	.65	.89	1.57	2.36	1.06	1.37	6.59
11	3.85	1.36	.88	1.43	1.20	1.04	1.50	1.78	2.45	.91	1.25	7.25
12	3.79	2.12	.76	1.44	.99	1.33	2.26	2.13	1.89	.87	1.21	4.85
13	3.32	1.93	.69	1.52	1.29	1.57	2.26	2.42	1.51	.84	1.14	3.46
14	2.09	1.36	.50	1.92	2.26	1.41	1.81	2.56	1.08	.82	1.12	3.64
15	2.53	1.28	.59	1.88	2.95	2.04	2.21	2.38	1.20	.91	1.50	3.35
16	2.19	1.28	.67	.67	2.63	2.90	2.26	1.79	1.45	.77	1.47	3.22
17	2.05	1.49	.66	.69	1.92	2.07	1.97	1.64	1.91	.74	1.61	2.96
18	2.04	1.84	.54	.76	1.63	2.13	2.00	1.44	1.85	.96	1.50	2.86
19	2.09	1.89	.88	1.03	1.72	1.84	1.67	1.61	1.71	1.08	1.68	2.81
20	1.93	1.54	1.74	1.96	1.17	.80	1.81	1.71	1.63	1.30	2.05	---
21	1.73	1.72	1.80	2.13	2.12	.92	1.65	1.62	1.56	1.40	3.11	---
22	1.41	1.29	1.51	2.09	2.42	1.06	1.19	1.63	1.45	1.42	3.56	1.93
23	2.21	1.33	1.76	1.42	1.10	1.33	.88	1.82	1.64	1.45	2.63	1.87
24	2.17	1.60	1.04	1.29	1.22	1.47	1.00	1.78	1.59	1.32	2.12	2.04
25	1.83	---	1.30	1.84	2.11	1.62	1.71	1.95	2.06	1.30	1.96	2.51
26	1.75	---	1.44	2.02	2.38	1.80	2.24	2.10	2.22	1.07	1.94	2.85
27	1.15	---	.91	1.28	1.70	2.30	2.01	2.09	2.21	1.12	1.64	2.55
28	1.77	2.12	.66	1.23	1.96	1.81	1.63	2.02	2.42	1.12	1.23	2.56
29	2.30	1.96	.45	1.57	---	2.19	2.66	1.90	2.77	1.09	1.38	2.72
30	2.40	1.31	.39	1.27	---	2.99	2.32	1.73	1.68	1.12	1.87	1.64
31	1.95	---	.36	2.00	---	2.61	---	1.48	---	1.11	2.12	---
MAX	3.85	---	---	3.16	2.95	2.99	2.66	2.56	2.77	---	3.56	---

HIGHLAND BAYOU MAIN STEM

08077695 HIGHLAND BAYOU NEAR HITCHCOCK, TX

LOCATION.--Lat 29°21'36", long 95°02'22", Galveston County line, Hydrologic Unit 12040204, on center of earthen dam approximately 3000 ft upstream from FM 2004 and 0.5 mi east of Hitchcock.

DRAINAGE AREA.--Not determinable.

PERIOD OF RECORD.--Mar 1997 to current (daily maximum).

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.61 ft at 0115 hours on Sep 11.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.14	1.59	1.26	.95	2.65	1.22	1.89	1.86	1.39	1.47	1.12	2.76
2	1.53	1.02	1.91	1.22	2.08	1.00	2.30	1.70	1.46	1.74	1.02	3.28
3	1.60	.89	---	1.33	1.72	1.03	1.65	1.69	1.66	---	1.91	2.82
4	1.88	1.45	---	2.14	1.85	1.71	1.34	1.50	2.00	---	2.26	2.97
5	1.97	2.20	---	2.11	1.83	1.68	1.79	1.79	1.97	---	1.84	3.04
6	2.16	1.73	.81	4.17	1.54	1.82	2.15	1.90	1.51	1.36	1.73	2.66
7	3.21	1.04	2.28	3.88	.59	2.20	2.09	1.84	2.00	1.49	1.63	3.32
8	2.99	1.24	2.63	1.29	1.11	2.12	1.76	2.17	2.76	1.48	1.82	3.64
9	3.37	1.50	1.30	.93	1.38	.35	1.19	2.39	2.48	1.50	1.66	4.19
10	3.24	1.67	1.34	1.32	1.70	.60	.84	1.65	2.42	1.12	1.43	7.00
11	4.28	1.32	.85	1.39	1.16	.99	1.45	1.84	2.49	1.00	1.33	8.61
12	3.80	2.16	.73	1.39	.94	1.28	2.17	2.19	1.94	.93	1.27	4.91
13	3.35	1.93	.66	1.48	1.23	1.52	2.19	2.51	1.57	.92	1.20	3.48
14	2.23	1.32	.47	1.92	2.39	1.36	1.77	2.61	1.14	.89	1.17	3.62
15	2.54	1.24	.56	1.82	2.93	2.00	2.14	2.48	1.27	.98	1.58	3.44
16	2.24	1.25	.64	.63	2.54	3.07	2.23	1.86	1.50	.83	1.52	3.32
17	2.04	1.46	.63	.64	1.93	2.01	1.97	1.71	1.97	.81	1.68	3.07
18	2.04	1.83	.51	.71	1.58	---	1.98	1.50	1.91	1.02	1.57	2.94
19	2.05	1.89	.84	.98	1.68	1.81	1.61	1.67	1.77	1.16	1.75	---
20	1.91	1.50	1.72	1.90	1.12	.76	1.76	1.78	1.69	1.37	2.12	---
21	1.70	1.68	1.77	2.24	2.07	.86	1.60	1.68	1.63	1.46	3.20	---
22	1.38	1.26	1.48	2.06	2.57	1.01	1.14	1.69	1.51	1.49	3.81	---
23	2.17	1.31	1.74	1.38	1.04	1.27	.83	1.90	1.71	1.51	2.50	1.92
24	2.15	1.57	1.01	1.25	1.16	1.41	1.05	1.84	1.66	1.39	2.20	2.04
25	1.80	---	1.26	1.81	2.10	1.56	1.75	2.01	2.22	1.38	2.04	2.57
26	1.75	---	1.41	1.98	2.20	1.75	2.25	2.15	2.31	1.13	2.00	2.87
27	1.12	---	.87	1.23	1.68	2.26	2.06	2.19	2.33	1.19	1.71	2.56
28	1.74	2.07	---	1.18	1.99	1.76	1.69	2.09	2.57	1.20	1.30	2.55
29	2.27	1.91	.43	1.53	---	2.13	2.71	1.97	2.12	1.16	1.45	2.75
30	2.44	1.27	.37	1.23	---	2.93	2.31	1.80	1.78	1.18	1.91	1.66
31	1.94	---	.33	1.99	---	2.34	---	1.56	---	1.17	2.18	---
MAX	4.28	---	---	4.17	2.93	---	2.71	2.61	2.76	---	3.81	---

HIGHLAND BAYOU BASIN

08077740 LAMARQUE LEVEE PUMP STATION NEAR LAMARQUE, TX

LOCATION.--Lat 29°20'44", long 94°57'47", Galveston County, Hydrologic Unit 12040204, in the LaMarque Levee pumping station on the LaMarque hurricane protection levee, one orifice located landward and one seaward, 0.5 mi southwest of Interstate Highway 45, 0.9 mi south of LaMarque, 4.8 mi northwest of Virginia Point.

Supplementary gage (station 08077752).--Lat 29°20'26", long 94°51'00", 4,000 ft southeast along LaMarque Levee from LaMarque Levee Pumping Station.

PERIOD OF RECORD.--Nov 1986 to current year.

GAGE.--Water-stage recorders. Datum of gages are sea level (levels by Galveston County Engineer). Radio and telephone telemeter at station.

REMARKS.--Records good. Landward orifice records elevation of flood runoff behind levee. This runoff is pumped into Jones Bay. Only maximum landward elevations equal or exceeding, -3.0 ft are shown. Seaward records are tidal but influenced by runoff in Highlands Bayou.

Supplementary gage: Records poor. Landward orifice records elevation of flood runoff behind levee. Seaward records are equivalent to seaward records at primary station. A channel connects site to pumping station. Water will be pumped, or drained by gravity, into Jones Bay depending on elevation of seaward water-surface. Only elevations equal or exceeding -2.0 ft are shown. Radio telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation (landward) 3.5 ft Jul 26, 1989; maximum elevation (seaward) 6.5 ft Sep 11, 1998; minimum (seaward), -2.0 ft Apr 11, 1988. Supplementary gage: Maximum elevation (landward) 11.0 ft Jun 7, 1992; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation (landward) .8 ft Sep 11 at 0215; maximum elevation (seaward) 6.5 ft Sep 11, at 0230 hours; minimum (seaward), -1.3 ft Dec 30 at 1530 hours.
Supplementary gage: Maximum elevation (landward) not recorded; minimum not determined.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER				NOVEMBER				DECEMBER			
	LAND- WARD MAX	SEA- WARD MAX	SEA- WARD MIN	SUPPLE- MENTARY MAX	LAND- WARD MAX	SEA- WARD MAX	SEA- WARD MIN	SUPPLE- MENTARY MAX	LAND- WARD MAX	SEA- WARD MAX	SEA- WARD MIN	SUPPLE- MENTARY MAX
1	---	.5	.0	---	---	1.1	-.1	---	---	.6	-.5	---
2	---	1.0	.4	---	---	.4	-.5	---	---	1.3	.3	---
3	---	1.1	.5	---	---	.3	-1.0	---	---	1.5	.0	---
4	---	1.3	.8	---	---	.7	-.5	---	---	.5	-.6	---
5	---	1.4	.7	---	---	1.5	.6	---	---	.1	-.6	---
6	---	1.5	.8	---	---	1.1	-.4	---	---	.3	-.4	---
7	-2.1	2.0	1.4	---	---	.4	-.5	---	-2.9	1.8	.1	---
8	-2.3	2.4	1.6	---	---	.7	.0	---	-1.1	2.0	.4	---
9	---	2.6	1.4	---	---	.9	.3	---	---	.8	.1	---
10	---	2.5	1.8	---	---	1.0	.2	---	---	.9	-.3	---
11	---	3.0	2.0	---	---	.7	.1	---	---	.2	-.7	---
12	---	3.1	2.1	---	---	1.5	.7	---	---	.1	-.8	---
13	---	2.6	.8	---	---	1.3	.4	---	---	.1	-.8	---
14	---	1.4	.7	---	---	.8	-.1	---	---	.0	-1.1	---
15	---	1.9	1.0	---	---	.6	-.5	---	---	.1	-.6	---
16	---	1.6	.8	---	-3.0	.6	-.5	---	---	.2	-.6	---
17	---	1.4	.5	---	-2.9	.9	.1	---	---	.2	-.7	---
18	---	1.4	.5	---	---	1.2	.4	---	---	.1	-.7	---
19	---	1.5	.4	---	---	1.3	.0	---	---	.2	-.3	---
20	---	1.3	.3	---	---	.9	.2	---	---	1.1	.2	---
21	---	1.1	.0	---	---	1.0	.0	---	---	1.3	-.1	---
22	---	.7	-.1	---	---	.6	.0	---	---	.7	.0	---
23	---	1.5	.3	---	---	.6	.2	---	---	1.3	.7	---
24	---	1.6	.3	---	---	1.0	.6	---	---	.7	-.3	---
25	---	1.1	.4	---	---	1.1	.5	---	---	.6	-.3	---
26	---	1.0	.0	---	---	1.1	.3	---	---	.8	.2	---
27	---	.4	-.1	---	---	1.2	.2	---	---	.3	-.7	---
28	---	1.2	.4	---	---	1.5	.9	---	---	.0	-1.1	---
29	---	1.7	.9	---	---	1.3	.1	---	---	-.7	-1.3	---
30	---	1.8	.9	---	---	.8	-.7	---	---	-1.2	-1.3	---
31	---	1.3	.5	---	---	---	---	---	---	-.4	-1.2	---
MONTH		3.1	-.1			1.5	-1.0			2.0	-1.3	

HIGHLAND BAYOU BASIN

08077740 LAMARQUE LEVEE PUMP STATION NEAR LAMARQUE, TX--Continued

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

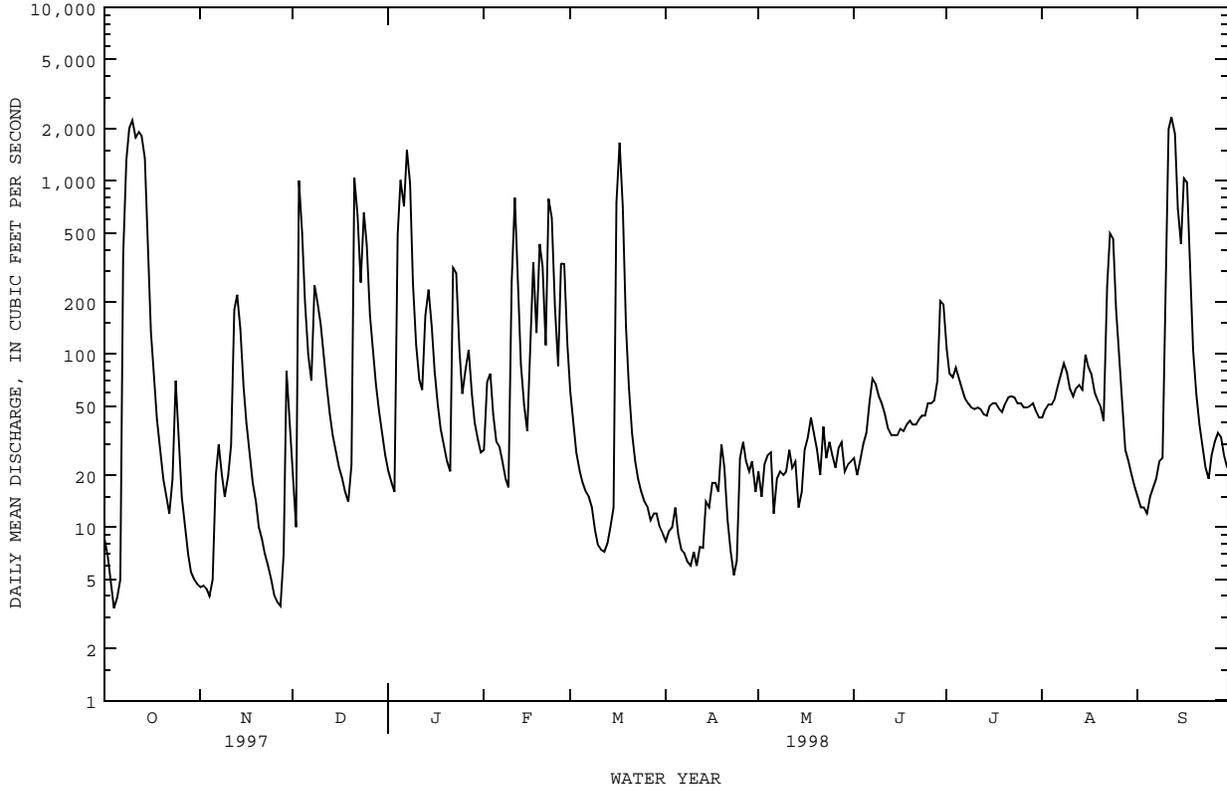
DAY	JULY				AUGUST				SEPTEMBER			
	LAND- WARD	SEA- WARD	SEA- WARD	SUPPLE- MENTARY	LAND- WARD	SEA- WARD	SEA- WARD	SUPPLE- MENTARY	LAND- WARD	SEA- WARD	SEA- WARD	SUPPLE- MENTARY
	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX	MAX	MAX	MIN	MAX
1	---	.8	.2	---	---	.7	-.1	---	---	2.3	1.4	---
2	---	.9	.4	---	---	.6	-.1	---	---	2.9	1.8	---
3	---	1.9	.7	---	---	1.4	.0	---	---	2.6	1.6	---
4	---	1.3	.3	---	---	1.8	.7	---	---	2.7	1.5	---
5	---	1.0	.1	---	---	1.4	.4	---	---	2.6	1.7	---
6	---	.8	-.1	---	---	1.2	.3	---	---	2.3	1.6	---
7	---	.9	-.2	---	---	1.1	.2	---	---	3.0	1.7	---
8	---	.9	.0	---	---	1.3	.2	---	---	3.3	2.6	---
9	---	.9	-.1	---	---	1.2	.4	---	---	3.8	2.8	---
10	---	.6	-.2	---	---	1.0	.2	---	-1.6	5.6	3.8	---
11	---	.4	-.4	---	---	.9	.3	---	.8	6.5	4.6	---
12	---	.4	-.4	---	---	.8	.4	---	---	4.7	2.5	---
13	---	.5	-.5	---	---	.8	.2	---	---	3.3	2.2	---
14	---	.3	-.3	---	---	.7	.0	---	-2.5	3.5	2.2	---
15	---	.3	-.3	---	-2.8	1.1	.2	---	-2.2	3.1	2.1	---
16	---	.3	-.2	---	-2.7	1.2	.2	---	---	3.1	1.9	---
17	---	.2	-.4	---	-2.7	1.2	.2	---	---	2.8	1.9	---
18	---	.4	-.3	---	---	1.1	.2	---	---	2.6	2.0	---
19	---	.6	-.3	---	---	1.3	.3	---	---	2.8	1.9	---
20	---	.8	-.3	---	---	1.7	.5	---	---	2.3	1.6	---
21	---	.8	-.1	---	---	2.8	1.0	---	---	1.9	1.4	---
22	---	.9	-.1	---	---	3.3	2.1	---	---	1.6	1.1	---
23	---	.9	-.1	---	-2.1	2.3	1.5	---	---	1.7	1.0	---
24	---	.8	-.1	---	-2.0	1.8	1.3	---	---	1.9	1.3	---
25	---	.8	.0	---	---	1.7	1.1	---	---	2.3	1.6	---
26	---	.7	.1	---	---	1.6	1.0	---	---	2.6	1.9	---
27	---	.7	.1	---	---	1.4	.7	---	---	2.4	1.2	---
28	---	.7	.2	---	---	1.0	.4	---	---	2.4	1.6	---
29	---	.8	.4	---	---	1.1	.5	---	---	2.6	1.0	---
30	---	.7	.1	---	---	1.6	.6	---	---	1.5	.7	---
31	---	.7	.0	---	---	1.9	.8	---	---	---	---	---
MONTH		1.9	-.5			3.3	-.1			6.5	.7	

CHOCOLATE BAYOU BASIN

08078000 CHOCOLATE BAYOU NEAR ALVIN, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1959 - 1998	
ANNUAL TOTAL	82145.5		55596.2		121	
ANNUAL MEAN	225		152		340	1979
HIGHEST ANNUAL MEAN					39.6	1988
LOWEST ANNUAL MEAN					15700	Jul 26 1979
HIGHEST DAILY MEAN	3070	Apr 12	2330	Sep 12	.03	Dec 17 1975
LOWEST DAILY MEAN	2.4	Sep 18	3.4	Oct 4	.08	Oct 15 1977
ANNUAL SEVEN-DAY MINIMUM	2.9	Sep 13	4.6	Oct 30	21500	Jul 26 1979
INSTANTANEOUS PEAK FLOW			2380	Sep 12	33.88	Jul 26 1979
INSTANTANEOUS PEAK STAGE			29.99	Sep 12		
ANNUAL RUNOFF (AC-FT)	162900		110300		87470	
10 PERCENT EXCEEDS	710		351		214	
50 PERCENT EXCEEDS	37		37		32	
90 PERCENT EXCEEDS	7.6		8.2		3.8	

e Estimated

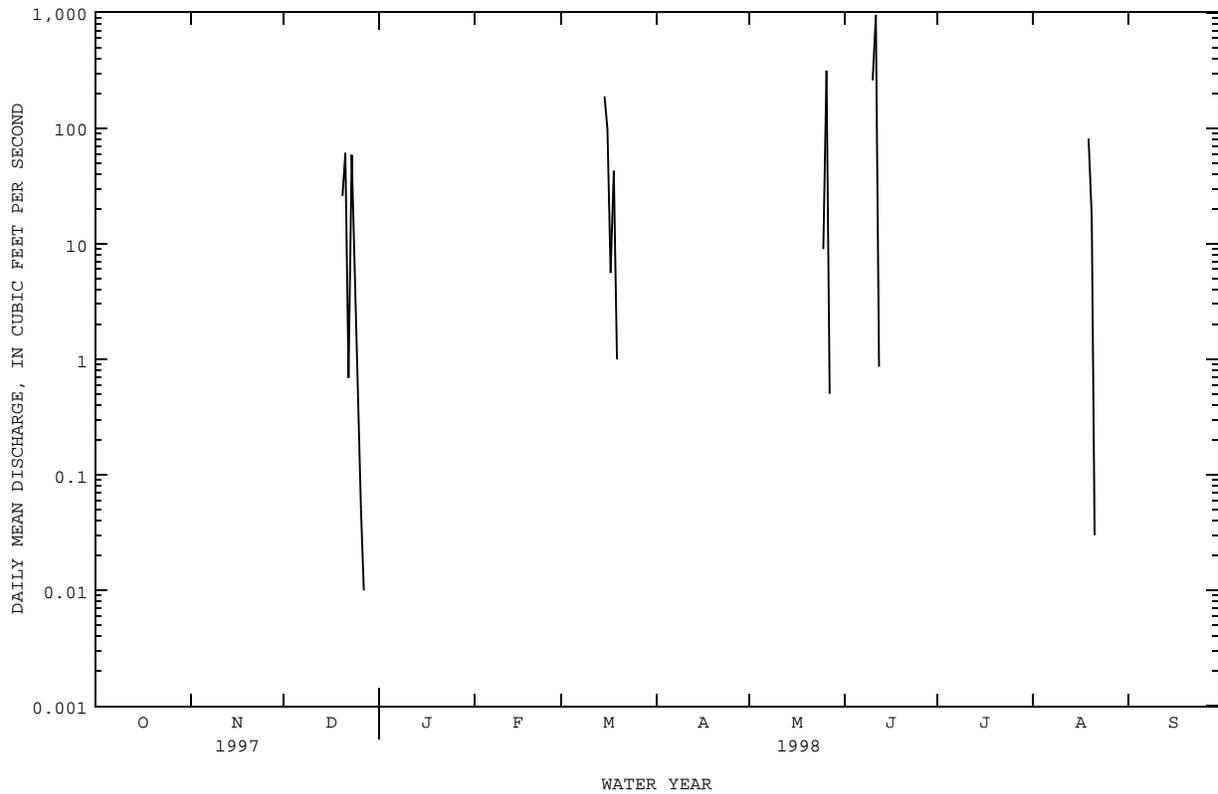


BRAZOS RIVER BASIN

08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	11462.81		2136.70		25.4	
ANNUAL MEAN	31.4		5.85		1.65	
HIGHEST ANNUAL MEAN					69.8	1967
LOWEST ANNUAL MEAN					1.65	1983
HIGHEST DAILY MEAN	2800	Apr 25	959	Jun 11	9920	Aug 13 1972
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Feb 17 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 8	.00	Mar 3 1962
INSTANTANEOUS PEAK FLOW			4680	Jun 11	49600	May 6 1969
INSTANTANEOUS PEAK STAGE			a9.20	Jun 11	19.80	May 6 1969
ANNUAL RUNOFF (AC-FT)	22740		4240		18390	
ANNUAL RUNOFF (CFSM)	.13		.024		.10	
ANNUAL RUNOFF (INCHES)	1.75		.33		1.41	
10 PERCENT EXCEEDS	13		.00		9.6	
50 PERCENT EXCEEDS	.00		.00		.03	
90 PERCENT EXCEEDS	.00		.00		.00	

e Estimated
a From floodmark.



08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Chemical analyses: Dec 1964 to Sep 1965, and Oct 1975 to current year. Sediment analyses: Jun 1977 to Jun 1982.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct 1975 to current year.

WATER TEMPERATURE: Oct 1975 to current year.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1989 to 1998. The standard error of estimate for dissolved solids is 4%, chloride is 42%, sulfate is 38% and for hardness is 45%. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 31,400 microsiemens, Dec 6, 1994; minimum daily, 370 microsiemens, Oct 20, 1983.

WATER TEMPERATURE: Maximum daily, 37.0°C, Jun 12, 1998; minimum daily, 0.0°C, on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 18,400 microsiemens, Dec 17; minimum daily, 672 microsiemens, Jun 11.

WATER TEMPERATURE: Maximum daily, 37.0°C, Jun 12; minimum daily, 1.0°C, Dec 24.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT									
07...	1430	.01	16700	25.5	1400	1300	330	147	3270
DEC									
17...	1200	.01	18400	9.5	1500	1300	340	154	3360
21...	0900	38	1090	4.0	78	--	20	6.5	196
MAR									
15...	1630	29	3190	14.5	200	41	59	12	572
JUN									
11...	1145	202	640	21.5	59	--	17	4.1	113

DATE	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKALINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)
OCT								
07...	38	15	160	670	5600	1.3	12	10200
DEC								
17...	38	11	200	670	5700	1.2	9.7	10400
21...	10	4.4	150	120	170	1.3	12	623
MAR								
15...	18	3.3	160	170	840	.33	11	1760
JUN								
11...	6	3.0	120	62	73	1.0	9.2	354

BRAZOS RIVER BASIN

08079600 DOUBLE MOUNTAIN FORK BRAZOS RIVER AT JUSTICEBURG, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1997 TO SEPTEMBER 1998

MONTH YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- SIEMENS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1997	0.01	16700	8840	0.24	5400	0.15	680	0.02	1300
NOV. 1997	0	--	--	--	--	--	--	--	--
DEC. 1997	156.79	1180	624	264	330	141	44	18.6	71
JAN. 1998	0	--	--	--	--	--	--	--	--
FEB. 1998	0	--	--	--	--	--	--	--	--
MAR. 1998	337.6	2300	1220	1110	660	600	87	78.9	140
APR. 1998	0.91			0.00	0.00	0.00	0.00	0.00	
MAY 1998	323.5	935	494	432	260	230	35	30.4	56
JUNE 1998	1219.86	743	393	1290	210	687	28	90.9	44
JULY 1998	0	--	--	--	--	--	--	--	--
AUG. 1998	98.03	983	520	138	280	73.3	37	9.7	59
SEPT 1998	0	--	--	--	--	--	--	--	--
TOTAL	2136.7	**	**	3240	**	1730	**	228	**
WTD.AVG.	5.9	1060	561	**	300	**	40	**	64

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY EQUIVALENT MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	16700	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	e1000	---	---	---
11	---	---	---	---	---	---	---	---	672	---	---	---
12	---	---	---	---	---	---	---	---	1580	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	3000	---	---	---	---	---	---
16	---	---	---	---	---	1350	---	---	---	---	---	---
17	---	---	18400	---	---	2500	---	---	---	---	---	---
18	---	---	---	---	---	1400	---	---	---	---	---	---
19	---	---	---	---	---	3120	---	---	---	---	e1000	---
20	---	---	e1500	---	---	---	---	---	---	---	900	---
21	---	---	1200	---	---	---	---	---	---	---	e2000	---
22	---	---	3000	---	---	---	---	---	---	---	---	---
23	---	---	900	---	---	---	---	---	---	---	---	---
24	---	---	1500	---	---	---	---	---	---	---	---	---
25	---	---	4000	---	---	---	---	e2000	---	---	---	---
26	---	---	e10000	---	---	---	---	900	---	---	---	---
27	---	---	e15000	---	---	---	---	3500	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated

BRAZOS RIVER BASIN

08079700 LAKE ALAN HENRY RESERVOIR NEAR JUSTICEBURG, TX

LOCATION.--Lat 33°03'46", long 101°02'50", Garza County, Hydrologic Unit 12050004, on left bank at left end of dam in intake structure of Alan Henry Dam on Double Mountain Fork Brazos River, 9 miles east of Justiceburg and 0.5 mile west of Garza and Kent county line.

DRAINAGE AREA.--1,616.7 mi², of which 1,222 mi² probably is noncontributing.

PERIOD OF RECORD.--Oct 1997 to Sep 1998.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Brazos River Authority). Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily contents, which are fair. The dam was completed Oct 1993. Impoundment of water has been limited to elevation 2,190 ft. The reservoir is formed by a rolled earthfill dam, 3,600 foot long. The dam and lake are owned by the City of Lubbock and operated by Brazos River Authority for recreation and future municipal use. The spillway consists of a fixed gate type service spillway with an ogee crest and an emergency spillway 1,700-foot-long cut into natural ground near right end of dam. The control works consist of 30 and 42-inch-diameter gated steel conduits, encased in concrete, that discharge from the outlet structure. Figures given herein represent total contents. Data regarding the dam and reservoir are given in the following table:

	Elevation (feet)
Top of dam.....	2,263.0
Design flood.....	2,259.44
Crest of spillway.....	2,240.0
Crest of service spillway (top of conservation pool.....	2,220.0
Lowest gated outlet (invert).....	2,140.0

COOPERATION.--The capacity curve dated Oct 1, 1993 was furnished by the Brazos River Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 40,200 acre-ft, Jun 13, 1998 (elevation, 2,184.79 ft); minimum, 36,660 acre-ft, Sep 30, 1998 (elevation, 2,182.36 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,200 acre-ft, Jun 13 (elevation, 2,184.79 ft); minimum contents, 36,660 acre-ft, Sep 30 (elevation, 2,182.36 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39560	38910	38470	38910	38700	38660	39070	38370	38270	39310	38110	e37570
2	39530	38880	38470	38920	38700	38650	39050	38330	38200	39260	38070	e37530
3	39500	38850	38460	38950	38690	38650	39000	38310	38180	39220	38010	37480
4	39470	38840	38440	38940	38690	38630	38970	38300	38150	39190	37990	37440
5	39440	38820	38410	38940	38690	38620	38970	38270	38090	39160	37980	37410
6	39440	38790	38410	38920	38690	38600	38950	38240	38050	39110	37950	37390
7	39430	38780	38500	38920	38690	38590	38910	38210	38050	39080	37930	37360
8	39410	38780	38500	38910	38690	38560	38880	38180	38020	39070	37890	37320
9	39380	38730	38440	38890	38690	38550	38850	38120	37990	39030	37860	37290
10	39380	38700	38410	38890	38660	38530	38850	38120	38250	38960	37820	37230
11	39380	38690	38400	38890	38660	38500	38810	38090	40100	38940	37770	37190
12	39370	38690	38380	38860	38650	38500	38790	38070	40130	38920	37760	37160
13	39320	38690	38370	38850	38660	38500	38750	38050	40110	38910	37750	37130
14	39310	38660	38370	38850	38660	38500	38730	38050	40040	38860	37720	37100
15	39260	38650	38370	38850	38700	38840	38700	38020	39990	38810	37720	37060
16	39250	38630	38340	38840	38760	39110	38660	37990	39960	38780	37690	37030
17	39220	38630	38340	38840	38750	39160	38650	37990	39900	38760	37660	37020
18	39200	38620	38340	38820	38750	39260	38630	37960	39870	38730	37600	37000
19	39160	38600	38330	38820	38750	39230	38630	37920	39860	38690	37670	36960
20	39140	38600	38460	38810	38750	39230	38590	37880	39800	38650	37770	36950
21	39130	e38600	38660	38780	38750	39230	38570	37860	39740	38600	37750	36920
22	39130	e38590	38660	38760	38750	39230	38560	37830	39710	38560	37720	36860
23	39190	e38570	38910	38760	38750	39230	38550	37800	39670	38520	37690	36850
24	39140	38550	38950	38760	38750	39220	38530	37800	39610	38470	37670	36830
25	39100	38550	38970	38750	38720	39220	38470	37830	39590	38430	37730	36790
26	39030	38520	38970	38730	38700	39220	38460	38470	39500	38370	37720	36760
27	39010	38520	38980	38730	38680	39190	38430	38430	39470	38340	37690	36730
28	39000	38520	38940	38720	38680	39160	38400	38410	39430	38300	37660	36720
29	38970	38490	38940	38700	---	39160	38380	38380	39380	38240	37630	36700
30	38950	38470	38920	38700	---	39130	38380	38360	39350	38180	37600	36660
31	38940	---	38910	38700	---	39080	---	38300	---	38150	37600	---
MAX	39560	38910	38980	38950	38760	39260	39070	38470	40130	39310	38110	37570
MIN	38940	38470	38330	38700	38650	38500	38380	37800	37990	38150	37600	36660
(+)	2183.94	2183.62	2183.92	2183.78	2183.76	2184.04	2183.56	2183.50	2184.22	2183.40	2183.02	2182.36
(@)	-650	-470	+440	-210	-20	+400	-700	-80	+1050	-1200	-550	-940

WTR YR 1998 MAX 40130 MIN 36660 (@) -2930

(+) Elevation, in feet, at end of month.

(@) Change in contents, in acre-feet.

e Estimated

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX

LOCATION.--Lat 33°00'29", long 100°10'49", Stonewall County, Hydrologic Unit 12050004, on right bank at downstream side of bridge on U.S. Highway 83, 0.3 mi downstream from Hitson Creek, 10 mi south of Aspermont, and at mile 34.5, measured from confluence with Salt Fork Brazos River, which is at mile 923.2 on the Brazos River.

DRAINAGE AREA.--8,796 mi², of which 6,932 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Dec 1923 to Sep 1934, Jun 1939 to current year.

REVISED RECORDS.--WSP 733: 1927(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,624.79 ft above sea level. Dec 3, 1923 to Sep 30, 1934, nonrecording gage at site 90 ft downstream at datum 2.0 ft higher, and Jun 8, 1939 to Aug 12, 1972, water-stage recorder at present site and datum 2.0 ft higher. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since water year 1994, at least 10% of contributing drainage area has been regulated by Lake Alan Henry Reservoir (station 08079700). There are small diversions above station for oil field operations.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--64 years (water years 1925-34, 1940-93) prior to completion of Lake Alan Henry, 158 ft³/s (114,300 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925-34, 1940-93).--Maximum discharge, 91,400 ft³/s Sep 26, 1955 (gage height, 29.50 ft); no flow at times most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.90	.44	10	4.1	13	13	3.9	.00	.04	.00	.00
2	.80	e.80	.50	9.6	4.1	13	12	2.2	.00	.03	.00	.00
3	.64	.72	.56	9.2	4.6	12	12	.98	.14	.03	.00	.00
4	e.50	.72	.64	14	5.3	11	10	.54	16	.02	.00	.00
5	e.50	.72	.56	16	7.6	11	9.6	.25	5.6	.02	.00	.00
6	.44	.64	.72	16	9.6	10	8.4	.18	.00	.02	.00	.00
7	.38	.52	2.8	15	10	26	7.5	.07	235	.01	.00	.00
8	.33	.48	3.8	13	8.8	27	7.1	.70	359	.01	.00	.00
9	1.6	.57	3.3	12	6.9	17	6.7	14	52	.00	.00	.00
10	33	.58	2.6	11	6.6	15	6.2	18	18	.00	.00	.00
11	13	.56	2.0	9.2	6.7	13	5.5	8.2	15	.00	.00	.00
12	5.6	.84	e2.0	8.9	6.5	11	5.0	4.5	10	.15	.00	.00
13	3.3	1.6	1.8	9.2	6.8	11	4.7	2.0	8.0	7.8	.00	.00
14	2.2	1.6	2.2	9.6	6.6	10	4.7	.62	28	.96	.00	.00
15	2.2	1.4	2.2	8.8	6.7	13	4.7	.27	16	.03	.00	.00
16	1.8	1.5	1.8	7.6	7.5	52	3.5	.12	9.9	.01	.00	.00
17	1.4	1.6	1.5	6.9	8.0	42	3.6	.02	6.1	.01	.00	.00
18	e1.0	1.7	1.8	8.4	9.5	33	3.6	.00	2.7	.00	.00	.00
19	e.90	1.5	1.7	8.0	9.3	36	3.4	.00	1.4	.00	.00	.00
20	.72	1.5	6.5	7.7	8.8	34	3.0	.00	e1.0	.00	.00	.00
21	.72	1.4	93	7.6	11	35	2.6	.00	3.6	.00	.00	.00
22	.64	1.4	19	7.3	15	33	2.2	.00	1.8	.00	.00	.00
23	18	1.3	18	6.9	20	29	1.8	.00	e.50	.00	.00	.00
24	28	1.2	20	6.7	17	25	1.4	.00	.17	.00	.00	.00
25	6.8	1.2	18	5.6	16	19	.89	.00	.14	.00	.00	.00
26	2.6	1.2	16	5.6	15	16	1.3	40	.11	.00	.00	.00
27	2.2	1.2	17	5.3	15	15	2.8	27	.09	.00	.00	.00
28	2.0	1.1	16	5.0	14	15	1.8	15	.09	.00	.00	.00
29	1.7	e.70	13	5.0	---	15	7.5	7.8	.07	.00	.00	.00
30	1.5	.44	12	4.7	---	14	6.2	2.8	.05	.00	.00	.00
31	1.4	---	11	5.3	---	14	---	.00	---	.00	.00	---
TOTAL	136.97	31.59	292.42	275.1	267.0	640	162.69	149.15	790.46	9.14	0.00	0.00
MEAN	4.42	1.05	9.43	8.87	9.54	20.6	5.42	4.81	26.3	.29	.000	.000
MAX	.33	1.7	.93	.16	.20	.52	.13	.40	.359	7.8	.00	.00
MIN	.33	.44	.44	4.7	4.1	10	.89	.00	.00	.00	.00	.00
AC-FT	272	63	580	546	530	1270	323	296	1570	18	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998z, BY WATER YEAR (WY)

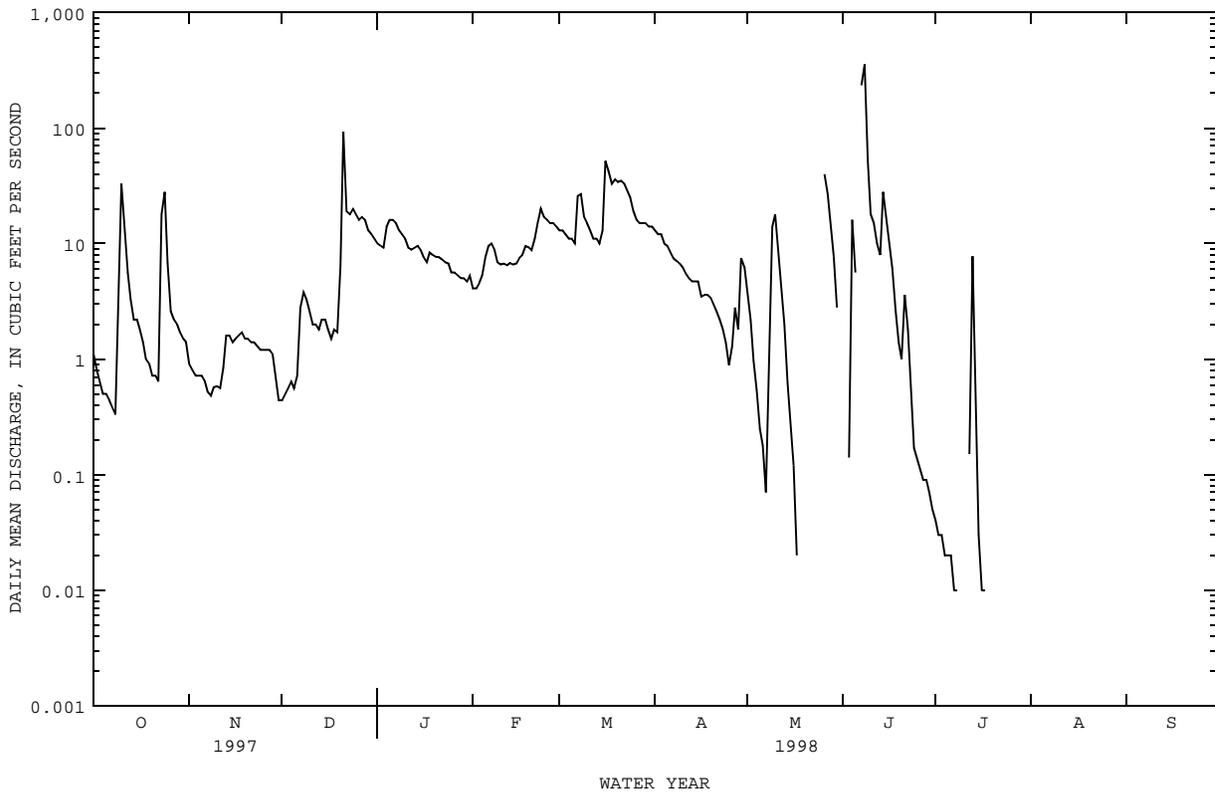
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	10.8	9.42	6.73	4.64	31.0	10.5	51.9	93.7	116	18.1	61.3	75.1
MAX	25.4	35.4	20.9	10.0	143	30.5	253	181	314	83.5	152	231
(WY)	1996	1997	1997	1997	1997	1997	1997	1997	1997	1997	1996	1995
MIN	3.21	.25	.45	.61	.038	.042	.033	.84	15.5	.065	.000	.000
(WY)	1995	1994	1994	1995	1995	1995	1995	1996	1994	1994	1994	1998

BRAZOS RIVER BASIN

08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1994 - 1998z	
ANNUAL TOTAL	29673.66		2754.52		40.6	
ANNUAL MEAN	81.3		7.55		85.9	
HIGHEST ANNUAL MEAN					1997	
LOWEST ANNUAL MEAN					1998	
HIGHEST DAILY MEAN	2900	Apr 27	359	Jun 8	2900	Apr 27 1997
LOWEST DAILY MEAN	.33	Oct 8	.00	May 18	.00	Oct 1 1993
ANNUAL SEVEN-DAY MINIMUM	.51	Oct 2	.00	May 18	.00	Oct 1 1993
INSTANTANEOUS PEAK FLOW			1350	Jun 7	5160	Aug 4 1995
INSTANTANEOUS PEAK STAGE			4.51	Jun 7	7.97	Aug 4 1995
ANNUAL RUNOFF (AC-FT)	58860		5460		29430	
10 PERCENT EXCEEDS	150		16		56	
50 PERCENT EXCEEDS	17		1.7		1.8	
90 PERCENT EXCEEDS	1.1		.00		.00	

e Estimated
z Period of regulated streamflow.



08080500 DOUBLE MOUNTAIN FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Oct 1948 to Nov 1951, Sep 1956 to May 1978, Oct 1994 to current year. Chemical and biochemical analyses: Jun 1978 to May 1993. Sediment analyses: Sep 1944 to Nov 1951, Jun 1978 to Sep 1993. Pesticide analyses: Mar to Jun 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct 1948 to Nov 1951, Sep 1956 to Sep 1995.
 WATER TEMPERATURE: Nov 1949 to Nov 1951, Sep 1956 to Sep 1995.
 SUSPENDED-SEDIMENT DISCHARGE: Nov 1949 to Sep 1951.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily records of specific conductance and regression relation between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 13,100 microsiemens, Jul 29, 1980; minimum daily, 720 microsiemens, Oct 18, 1985.
 WATER TEMPERATURE: Maximum daily, 38.0°C, Jul 18, 1966; minimum daily, 0.0°C, on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT 08...	0920	.33	7560	21.5	2600	750	170	913	8	12	1900	1800
FEB 11...	0900	6.6	9870	4.5	1900	530	136	1560	16	11	1700	2600
APR 15...	1055	4.6	10400	18.0	2100	590	161	1600	15	1.5	1900	2700

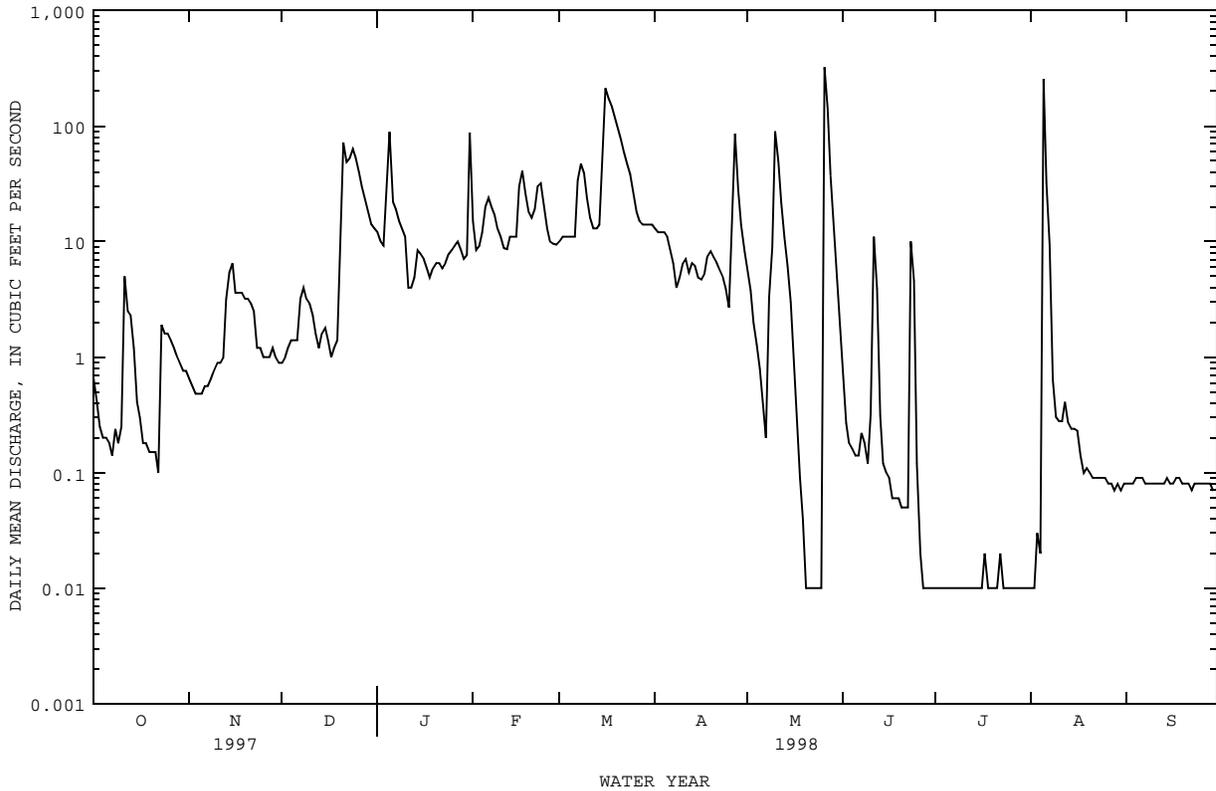
DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
OCT 08...	.56	12	<.010	<.050	.088	.19	.28	<.010	<.010	--	2
FEB 11...	.80	12	<.010	.085	.070	.11	.18	<.010	.018	.06	--
APR 15...	.95	8.9	<.010	<.050	.045	.17	.21	<.010	<.010	--	2

DATE	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT 08...	33	<2.0	<2.0	<2.0	<12	<2.0	669	<.1	<1	<2.0	<12
FEB 11...	--	--	--	--	--	--	--	--	--	--	--
APR 15...	49	<2.0	<1.0	<2.0	<80	<2.0	171	.4	<1	<2.0	217

08082000 SALT FORK BRAZOS RIVER NEAR ASPERMONT, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998hz	
ANNUAL TOTAL	24058.71		4283.30		67.6	
ANNUAL MEAN	65.9		11.7		212	
HIGHEST ANNUAL MEAN					11.7 1987	
LOWEST ANNUAL MEAN					11300 1998	
HIGHEST DAILY MEAN	1430	Apr 26	323	May 26	11300	Aug 14 1972
LOWEST DAILY MEAN	.10	Sep 21	.01	May 20	.00	Jul 31 1972
ANNUAL SEVEN-DAY MINIMUM	.17	Oct 16	.01	Jun 27	.01	Jul 30 1972
INSTANTANEOUS PEAK FLOW			852	May 26	30200	Aug 30 1966
INSTANTANEOUS PEAK STAGE			4.43	May 26	12.45	Aug 30 1966
ANNUAL RUNOFF (AC-FT)	47720		8500		48970	
10 PERCENT EXCEEDS	161		26		113	
50 PERCENT EXCEEDS	13		1.4		7.3	
90 PERCENT EXCEEDS	.61		.01		.20	

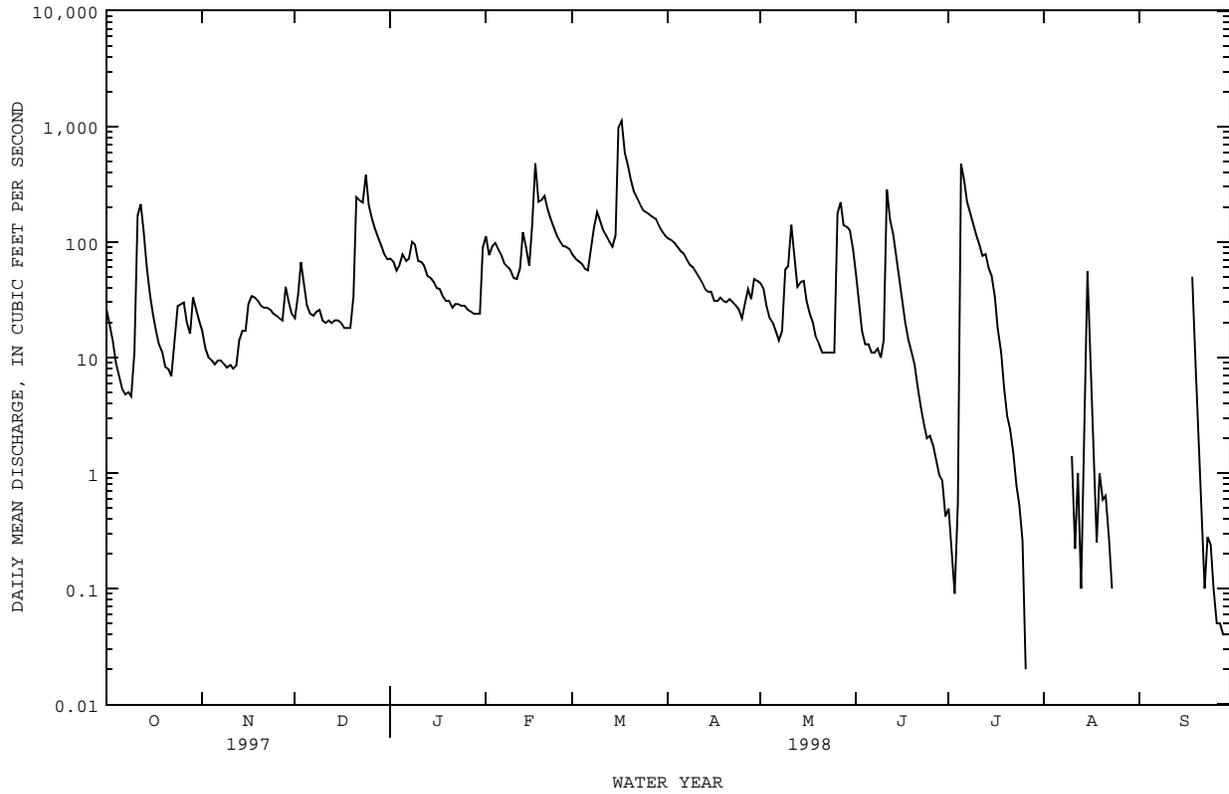
e Estimated
h See PERIOD OF RECORD paragraph.
z Period of regulated streamflow.



08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998z	
ANNUAL TOTAL	92499.2		22316.13			
ANNUAL MEAN	253		61.1		284	
HIGHEST ANNUAL MEAN					742	
LOWEST ANNUAL MEAN					61.1	
HIGHEST DAILY MEAN	4160	May 9	1130	Mar 17	30700	Jun 4 1990
LOWEST DAILY MEAN	4.6	Oct 9	.00	Jul 27	.00	May 24 1964
ANNUAL SEVEN-DAY MINIMUM	6.7	Oct 4	.00	Jul 27	.00	Jul 12 1964
INSTANTANEOUS PEAK FLOW			1560	Mar 16	95400	Oct 16 1926
INSTANTANEOUS PEAK STAGE			4.36	Mar 16	23.00	Sep 28 1955
ANNUAL RUNOFF (AC-FT)	183500		44260		205600	
10 PERCENT EXCEEDS	645		155		531	
50 PERCENT EXCEEDS	75		28		51	
90 PERCENT EXCEEDS	11		.00		3.1	

e Estimated
z Period of regulated streamflow.



BRAZOS RIVER BASIN

08082500 BRAZOS RIVER AT SEYMOUR, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Aug 1942 to Sep 1995, Oct 1996 to current year. Chemical and biochemical analyses: Oct 1974 to Sep 1977. Sediment analyses: Oct 1974 to Sep 1977. Pesticide analyses: Apr 1975 to Aug 1977.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Aug 1959 to Sep 1995.

WATER TEMPERATURE: Aug 1959 to Sep 1995.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 80,400 microsiemens, May 24, 1971; minimum daily, 47 microsiemens, May 16, 1989.

WATER TEMPERATURE: Maximum daily, 38.0oC Aug 1, 1983; minimum daily, 0.0oC on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
DEC 11...	1235	20	15400	8.2	3.0	13.2	106	1800	1700	480	156
MAR 19...	1220	452	4170	8.0	11.0	10.1	96	820	720	210	70
JUN 04...	1525	13	14700	8.3	30.0	9.6	139	1800	1600	500	126
AUG 18...	1550	.20	6040	8.6	27.5	11.8	158	670	570	180	56

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
DEC 11...	2810	28	11	180	1600	4800	.54	2.7	9930	.976
MAR 19...	1000	15	11	110	680	1600	<.50	7.1	3620	.477
JUN 04...	2840	30	20	140	1700	4600	.67	2.3	9890	--
AUG 18...	1080	18	9.6	97	720	1500	.79	8.6	3630	--

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, DIS-SOLVED (MG/L AS PO4) (00660)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIIUM, DIS-SOLVED (UG/L AS BA) (01005)
DEC 11...	.011	.987	<.020	--	.21	<.010	<.010	--	<1	47
MAR 19...	.017	.494	.083	.44	.53	.052	.052	.16	2	164
JUN 04...	<.010	<.050	<.020	--	.32	.011	<.010	--	3	95
AUG 18...	.011	<.050	.042	.40	.44	<.010	.018	.06	7	189

DATE	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
DEC 11...	<4.0	<4.0	<4.0	<100	<4.0	<40	.2	2	<4.0	<200
MAR 19...	<1.0	<1.0	4.0	<50	<1.0	<20	<.1	1	<1.0	<100
JUN 04...	<4.0	<4.0	<4.0	<100	<4.0	41	.6	<1	<4.0	<200
AUG 18...	<1.0	<1.0	1.6	<40	<1.0	47	<.1	<1	<1.0	<80

BRAZOS RIVER BASIN

08083100 CLEAR FORK BRAZOS RIVER NEAR ROBY, TX

LOCATION.--Lat 32°47'15", long 100°23'18", Fisher County, Hydrologic Unit 12060102, on right bank at downstream side of pile bent of bridge on State Highway 70, 3.0 mi north of Roby, 3.2 mi upstream from Cottonwood Creek, and 255.7 mi upstream from mouth.

DRAINAGE AREA.--228 mi².

PERIOD OF RECORD.--Dec 1961 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,885.09 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No known regulation. There are several small diversions above station. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since the 1890's, about 22 ft in May and Jun 1935, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.28	.86	.79	.81	.40	.53	.52	.11	.03	.00	.00
2	.30	.31	.85	.85	.77	.37	.52	.50	.08	.03	.00	.00
3	.31	.33	.92	.86	.75	.38	.53	.45	.07	.02	.00	.00
4	.30	.35	.89	.90	.76	.50	.53	.46	.07	.03	.00	.00
5	.33	.38	.85	.91	.87	.52	.56	.49	.07	.04	.00	.00
6	.33	.27	.86	.83	.80	.53	.55	.48	.07	.03	.00	.00
7	.34	.29	.90	.77	.75	.97	.53	.39	.08	.02	.00	.00
8	.27	.43	.95	.75	.69	.93	.54	.37	.09	.04	.00	.00
9	.20	.63	.92	.71	.66	.71	.56	.37	.08	.04	.00	.00
10	.20	.51	.88	.64	.67	.62	.58	.34	.13	.04	.00	.00
11	.20	.39	.75	.69	.65	.56	.58	.33	.30	.05	.00	.00
12	.17	.54	.73	.71	.66	.55	.58	.31	.13	.05	.00	.00
13	.12	.75	.74	.71	.64	.61	.58	.31	.11	.03	.00	.00
14	.12	.79	.76	.74	.64	.67	.63	.30	.08	.02	.00	.00
15	.13	.77	.78	.71	.67	1.0	.55	.29	e.07	.03	.00	.00
16	.10	.71	.80	.70	.72	1.2	.47	.27	e.05	.04	.00	.00
17	.09	.69	.81	.73	.69	1.0	.47	.29	.03	.04	.00	.00
18	.08	.75	.85	.75	.69	.94	.51	.29	e.03	.04	.00	.00
19	.08	.79	.90	.76	.68	.75	.52	.28	e.03	.04	.00	.00
20	.07	.82	1.3	.79	.64	.66	.55	.27	e.02	.03	.00	.00
21	.08	.78	1.3	.75	.76	.65	.53	.27	e.02	.02	.00	.00
22	.08	.79	1.1	.77	.94	.69	.52	.27	e.01	.01	.00	.00
23	.36	.77	1.0	.79	.87	.71	.49	.26	.01	.00	.00	.00
24	.29	.88	.96	.77	.72	.68	.49	.25	.00	.00	.00	.00
25	.19	.89	.86	.78	.65	.72	.47	.36	.03	.00	.00	.00
26	.18	.90	.92	.88	.54	.69	.50	4.7	.02	.00	.00	.00
27	.19	.91	.86	.81	.50	.72	.48	1.5	.03	.00	.00	.00
28	e.34	.91	.85	.79	.45	.58	.47	.92	.04	.00	.00	.00
29	.44	.86	.77	.78	---	.53	.49	.60	.05	.00	.00	.00
30	.40	.88	.78	.78	---	.50	.52	.31	.05	.00	.00	.00
31	.36	---	.75	.85	---	.48	---	.15	---	.00	.00	---
TOTAL	6.89	19.35	27.45	24.05	19.64	20.82	15.83	16.90	1.96	0.72	0.00	0.00
MEAN	.22	.65	.89	.78	.70	.67	.53	.55	.065	.023	.000	.000
MAX	.44	.91	1.3	.91	.94	1.2	.63	4.7	.30	.05	.00	.00
MIN	.07	.27	.73	.64	.45	.37	.47	.15	.00	.00	.00	.00
AC-FT	14	38	54	48	39	41	31	34	3.9	1.4	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

MEAN	10.5	2.60	2.78	2.72	3.53	3.44	6.02	25.4	14.8	5.86	8.87	19.4
MAX (WY)	142	17.6	15.8	12.7	23.9	19.6	51.6	257	84.4	60.6	141	249
MIN (WY)	1966	1987	1987	1987	1992	1987	1981	1982	1981	1975	1971	1969
MIN (WY)	.14	.26	.31	.31	.39	.34	.15	.12	.065	.023	.000	.000
MIN (WY)	1997	1965	1997	1997	1990	1965	1965	1996	1998	1998	1998	1998

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1962 - 1998

ANNUAL TOTAL	883.68	153.61	
ANNUAL MEAN	2.42	.42	8.86
HIGHEST ANNUAL MEAN			29.6
LOWEST ANNUAL MEAN			.42
HIGHEST DAILY MEAN	104	Jun 15	4.7
LOWEST DAILY MEAN	.07	Oct 20	.00
ANNUAL SEVEN-DAY MINIMUM	.08	Oct 16	.00
INSTANTANEOUS PEAK FLOW			17
INSTANTANEOUS PEAK STAGE			3.70
ANNUAL RUNOFF (AC-FT)	1750	305	6420
10 PERCENT EXCEEDS	1.6	.86	6.8
50 PERCENT EXCEEDS	.70	.40	1.6
90 PERCENT EXCEEDS	.23	.00	.29

e Estimated

08084000 CLEAR FORK BRAZOS RIVER AT NUGENT, TX

LOCATION.--Lat 32°41'24", long 99°40'09", Jones County, Hydrologic Unit 12060102, on right bank 33 ft downstream from bridge on Farm Road 600 at Nugent, 2 mi downstream from Elm Creek, 4 mi upstream from Deadman Creek, and 167.8 mi upstream from mouth.

DRAINAGE AREA.--2,199 mi².

PERIOD OF RECORD.--Feb 1924 to current year.

Water-quality records.--Chemical analyses: Aug 1948 to Sep 1953. Chemical and biochemical analyses: Feb 1968 to Sep 1981.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,531.91 ft above sea level (levels by Brazos River Authority). Prior to Dec 12, 1933, nonrecording gage at site 575 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1930, at least 10% of contributing drainage area has been regulated by three upstream reservoirs with a total capacity of 26,800 acre-ft. There are numerous diversions above station for municipal supply and oil field operation that materially affect streamflow.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--5 years (water years 1925-29) prior to completion of Lake Sweetwater, 145 ft³/s (105,200 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925-29).--Maximum discharge observed, 11,500 ft³/s May 20, 1928 (gage height, 18.00 ft), site then in use; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 30 ft in 1876; floods in 1900 and May 1923 reached stages of 24 and 24.5 ft, respectively, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.8	12	9.0	11	8.5	15	7.8	1.9	.05	.03	.07
2	4.9	5.5	12	9.3	13	8.4	15	7.3	1.4	.05	.03	.07
3	4.8	5.4	12	9.3	15	8.4	14	6.9	1.3	.05	.03	.07
4	4.5	5.4	11	9.4	12	8.4	14	6.2	1.3	.05	.03	.07
5	4.3	5.4	11	9.3	11	8.4	14	5.8	1.4	.05	.04	.07
6	3.6	5.2	9.8	9.2	10	8.4	14	5.8	1.5	.05	.05	.11
7	3.4	4.9	9.9	9.0	10	10	13	5.8	1.4	.05	.07	.12
8	3.3	5.2	10	9.3	9.9	15	13	5.5	1.6	.05	.12	.12
9	3.0	5.6	10	9.0	9.6	13	13	4.6	1.8	.05	.12	.12
10	3.0	6.3	9.6	9.0	9.6	15	13	3.9	1.7	.05	.12	.11
11	3.5	6.1	9.3	9.0	9.6	14	13	3.6	2.0	.05	.11	.11
12	4.6	6.0	8.6	9.0	9.6	12	13	3.6	2.5	.05	.19	.17
13	7.2	6.9	8.4	9.0	9.6	11	12	3.7	2.8	.03	.21	.21
14	6.3	7.8	8.4	9.0	9.6	11	12	3.2	3.0	.04	.25	.21
15	5.3	7.8	8.4	8.9	9.6	11	11	2.8	2.9	.05	.31	.21
16	4.4	7.8	8.4	8.4	9.6	23	10	2.7	2.7	.05	.33	.21
17	4.1	7.3	8.4	8.5	9.9	53	9.8	2.8	2.3	.05	.35	.21
18	4.1	7.1	8.4	8.6	9.7	57	9.6	3.0	1.6	.05	.37	.21
19	4.1	7.8	8.4	8.6	9.6	35	9.6	2.9	.99	.05	3.4	.20
20	4.1	8.2	10	8.8	9.6	27	9.5	2.4	.76	.05	2.2	.19
21	4.1	8.6	17	8.9	9.6	23	9.3	2.1	.44	.05	.42	.19
22	4.1	8.6	19	9.6	9.6	20	9.0	2.3	.28	.05	.10	.14
23	4.0	9.0	29	9.0	9.6	19	9.0	2.9	.21	.05	.06	.18
24	4.1	8.7	24	8.4	9.6	17	9.0	3.0	.14	.05	.05	.22
25	4.2	8.4	17	8.4	9.6	17	9.0	2.7	.07	.05	.05	.24
26	5.4	8.4	15	8.4	9.6	17	8.5	2.7	.07	.05	.05	.22
27	6.4	8.8	12	8.4	9.6	16	9.5	3.2	.05	.05	.05	.25
28	6.8	10	10	8.4	9.4	16	9.2	3.5	.05	.04	.05	.24
29	6.5	11	9.7	8.4	---	17	8.5	3.9	.05	.03	.07	.32
30	6.3	10	9.4	8.4	---	17	7.9	3.4	.05	.03	.07	.32
31	5.8	---	9.0	9.5	---	16	---	2.8	---	.03	.07	---
TOTAL	145.1	219.0	365.1	275.4	284.1	552.5	335.4	122.8	38.26	1.45	9.40	5.18
MEAN	4.68	7.30	11.8	8.88	10.1	17.8	11.2	3.96	1.28	.047	.30	.17
MAX	7.2	11	29	9.6	15	57	15	7.8	3.0	.05	3.4	.32
MIN	3.0	4.9	8.4	8.4	9.4	8.4	7.9	2.1	.05	.03	.03	.07
AC-FT	288	434	724	546	564	1100	665	244	76	2.9	19	10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998z, BY WATER YEAR (WY)

	1937	37.9	43.1	24.3	59.7	40.7	70.8	269	191	90.6	54.7	172
MEAN	137	37.9	43.1	24.3	59.7	40.7	70.8	269	191	90.6	54.7	172
MAX	1438	516	683	244	1370	389	1159	4694	1761	1190	496	3978
(WY)	1987	1975	1992	1992	1992	1987	1957	1957	1935	1938	1940	1932
MIN	.000	.56	.090	.032	.046	.010	.017	2.28	1.28	.035	.000	.000
(WY)	1953	1954	1955	1957	1954	1955	1955	1964	1998	1952	1931	1956

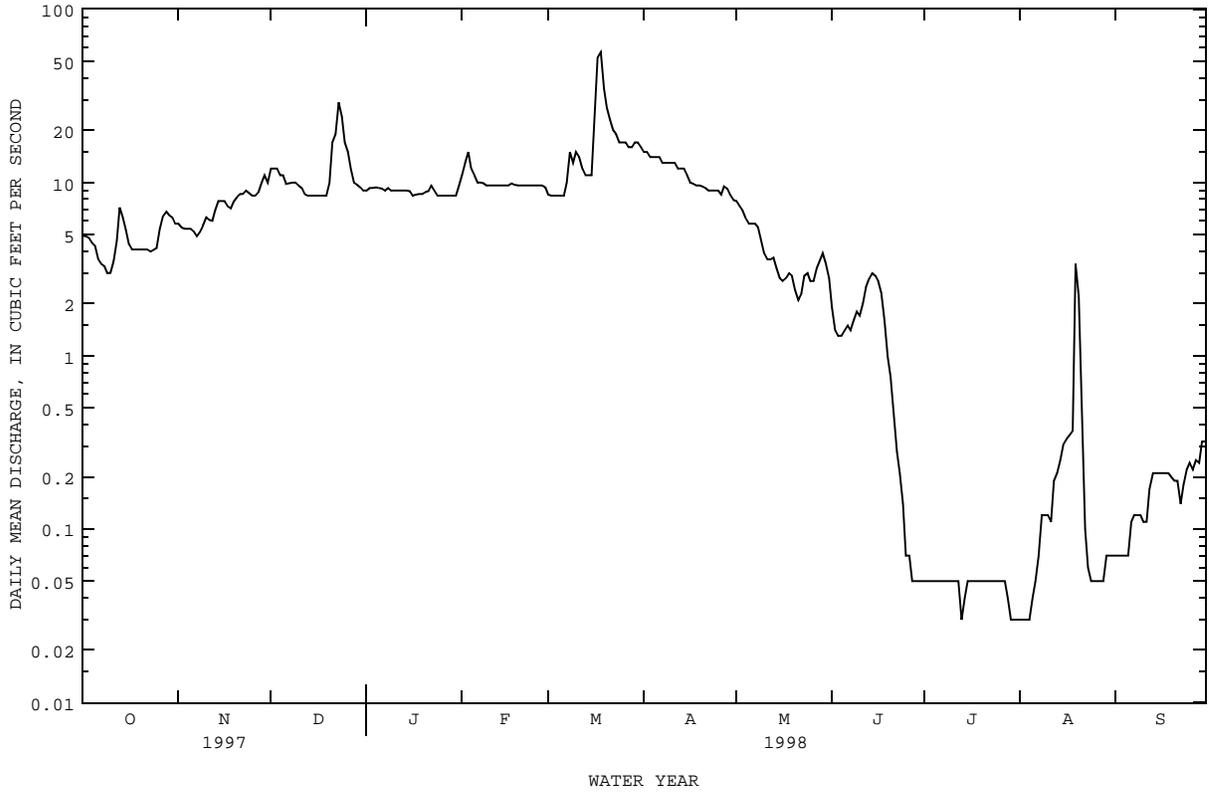
SUMMARY STATISTICS

	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1930 - 1998z	
ANNUAL TOTAL	25858.9		2353.69			
ANNUAL MEAN	70.8		6.45		99.3	
HIGHEST ANNUAL MEAN					713	
LOWEST ANNUAL MEAN					6.45	
HIGHEST DAILY MEAN	2160	Jun 11	57	Mar 18	30800	Sep 8 1932
LOWEST DAILY MEAN	3.0	Oct 9	.03	Jul 13	.00	Jul 27 1930
ANNUAL SEVEN-DAY MINIMUM	3.4	Oct 5	.03	Jul 29	.00	Jul 27 1930
INSTANTANEOUS PEAK FLOW			75	Mar 17	c47000	Sep 8 1932
INSTANTANEOUS PEAK STAGE			2.53	Mar 17	p27.05	Sep 8 1932
ANNUAL RUNOFF (AC-FT)	51290		4670		71950	
10 PERCENT EXCEEDS	122		13		124	
50 PERCENT EXCEEDS	17		5.8		13	
90 PERCENT EXCEEDS	5.2		.05		.80	

BRAZOS RIVER BASIN

08084000 CLEAR FORK BRAZOS RIVER AT NUGENT, TX--Continued

n Period of regulated streamflow.
c From rating curve extended above 25,000 ft³/s.
p Observed.

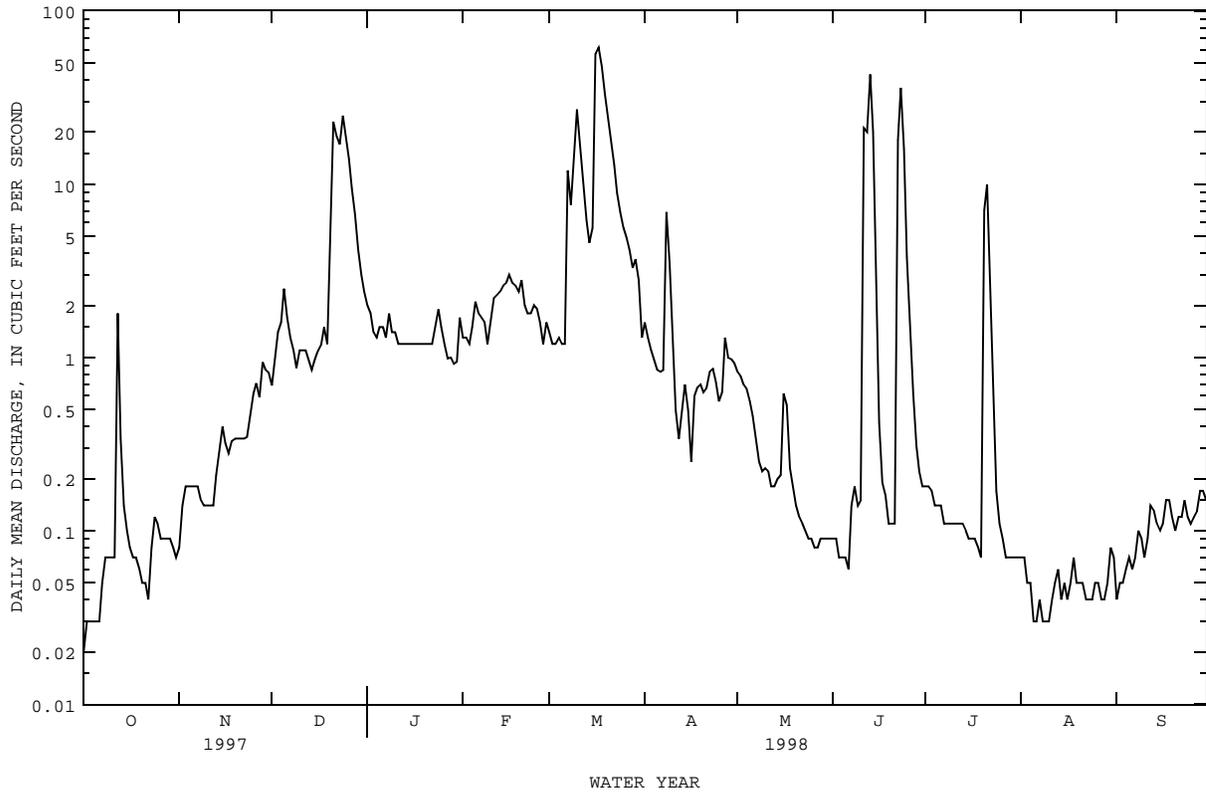


BRAZOS RIVER BASIN

08084800 CALIFORNIA CREEK NEAR STAMFORD, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1963 - 1998	
ANNUAL TOTAL	8166.18		941.57		36.1	
ANNUAL MEAN	22.4		2.58		156	
HIGHEST ANNUAL MEAN					1.95 1992	
LOWEST ANNUAL MEAN					20400 Aug 4 1978	
HIGHEST DAILY MEAN	1140	Jun 23	62	Mar 17	.00	Sep 11 1963
LOWEST DAILY MEAN	.02	Oct 1	.03	Oct 1	.00	May 17 1964
ANNUAL SEVEN-DAY MINIMUM	.03	Sep 25			40000 Aug 4 1978	
INSTANTANEOUS PEAK FLOW			84 Jun 22		31.00 Aug 4 1978	
INSTANTANEOUS PEAK STAGE			7.91 Jun 22		26190	
ANNUAL RUNOFF (AC-FT)	16200		1870		.076	
ANNUAL RUNOFF (CFSM)	.047		.005		29	
10 PERCENT EXCEEDS	31		5.2		2.6	
50 PERCENT EXCEEDS	2.5		.35		.10	
90 PERCENT EXCEEDS	.05		.05			

e Estimated



08085500 CLEAR FORK BRAZOS RIVER AT FORT GRIFFIN, TX

LOCATION.--Lat 32°56'04", long 99°13'27", Shackelford County, Hydrologic Unit 12060104, on right bank just downstream from pier of bridge on old Fort Griffin-Throckmorton Road, 0.4 mi northeast of Fort Griffin, 1.0 mi upstream from bridge on U.S. Highway 283, 1.7 mi upstream from Mill Creek, and 74.6 mi upstream from mouth.

DRAINAGE AREA.--3,988 mi².

PERIOD OF RECORD.--Dec 1923 to current year.

Water-quality records.--Chemical analysis: Nov 1949 to Sep 1951, Nov 1967 to Sep 1979, Nov 1981 to Sep 1984. Specific conductance and water temperature: Nov 1949 to Sep 1951, Nov 1967 to Sep 1979, Oct 1981 to Sep 1984. Suspended sediment discharge: Nov 1949 to Sep 1951.

REVISED RECORDS.--WSP 1392: 1949. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,174.09 ft above sea level. Prior to Jun 23, 1932, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1939, at least 10% of contributing drainage area has been regulated by Fort Phantom Hill Reservoir. There are diversions upstream from station for irrigation, municipal supply, and for oil field operations that materially affect low flow.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--14 years (water years 1925-38) prior to completion of Fort Phantom Hill Reservoir, 303 ft³/s (219,500 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925-38).--Maximum discharge, 33,600 ft³/s Sep 10, 1932 (gage height, 35.09 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in Sep 1900 reached a stage of 38.0 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	20	26	43	35	42	39	23	4.7	3.3	.00	.00
2	12	22	31	42	38	39	35	24	4.4	2.7	.00	.00
3	12	18	35	40	38	43	37	27	3.5	2.1	.00	.00
4	13	16	32	40	38	48	30	25	3.1	1.5	.00	.00
5	13	16	33	45	44	51	31	23	2.6	742	.00	.00
6	13	16	38	40	45	54	31	19	2.4	151	.00	.00
7	13	17	38	36	43	108	30	15	2.4	28	.00	.00
8	12	18	39	37	43	158	32	12	2.9	9.2	.00	.00
9	10	17	35	36	42	110	32	13	2.7	4.3	.00	.00
10	9.0	15	34	36	42	104	35	16	2.8	2.7	.00	.00
11	19	14	34	36	41	101	32	15	6.5	1.3	.00	.00
12	15	17	34	34	41	93	27	13	4.7	.70	.00	.00
13	12	22	34	30	41	92	24	10	4.7	.98	.00	.00
14	10	20	29	34	41	100	22	8.3	7.8	.64	.00	.00
15	9.9	21	28	35	43	102	23	7.4	18	.72	.00	.00
16	9.1	24	30	34	47	1230	23	6.6	51	.39	.00	.00
17	8.4	20	31	33	54	537	24	5.4	37	.15	.00	.00
18	14	17	30	34	51	424	26	4.6	24	.05	.00	.00
19	18	25	28	32	46	329	26	4.1	17	.01	.00	.00
20	17	28	46	31	45	242	24	4.0	11	.00	.00	.00
21	14	26	81	33	45	171	24	4.2	7.2	.00	.00	.00
22	14	25	56	31	45	136	23	4.3	5.8	.00	.00	.00
23	18	24	68	33	45	117	22	4.3	5.1	.00	.00	.00
24	19	23	79	32	45	100	22	3.6	4.5	.00	.00	.00
25	19	22	59	32	44	82	20	3.3	3.6	.00	.00	.00
26	19	24	82	35	43	80	23	3.3	2.9	.00	.00	.00
27	21	25	71	34	42	68	61	3.1	2.5	.00	.00	.00
28	21	29	59	34	43	63	30	2.7	2.1	.00	.00	.00
29	22	27	62	31	---	51	27	4.2	2.1	.00	.00	.00
30	20	28	56	30	---	45	26	5.6	2.7	.00	.00	.00
31	18	---	48	37	---	38	---	5.3	---	.00	.00	---
TOTAL	456.4	636	1386	1090	1210	4958	861	319.3	251.7	951.74	0.00	0.00
MEAN	14.7	21.2	44.7	35.2	43.2	160	28.7	10.3	8.39	30.7	.000	.000
MAX	22	29	82	45	54	1230	61	27	51	742	.00	.00
MIN	8.4	14	26	30	35	38	20	2.7	2.1	.00	.00	.00
AC-FT	905	1260	2750	2160	2400	9830	1710	633	499	1890	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998z, BY WATER YEAR (WY)

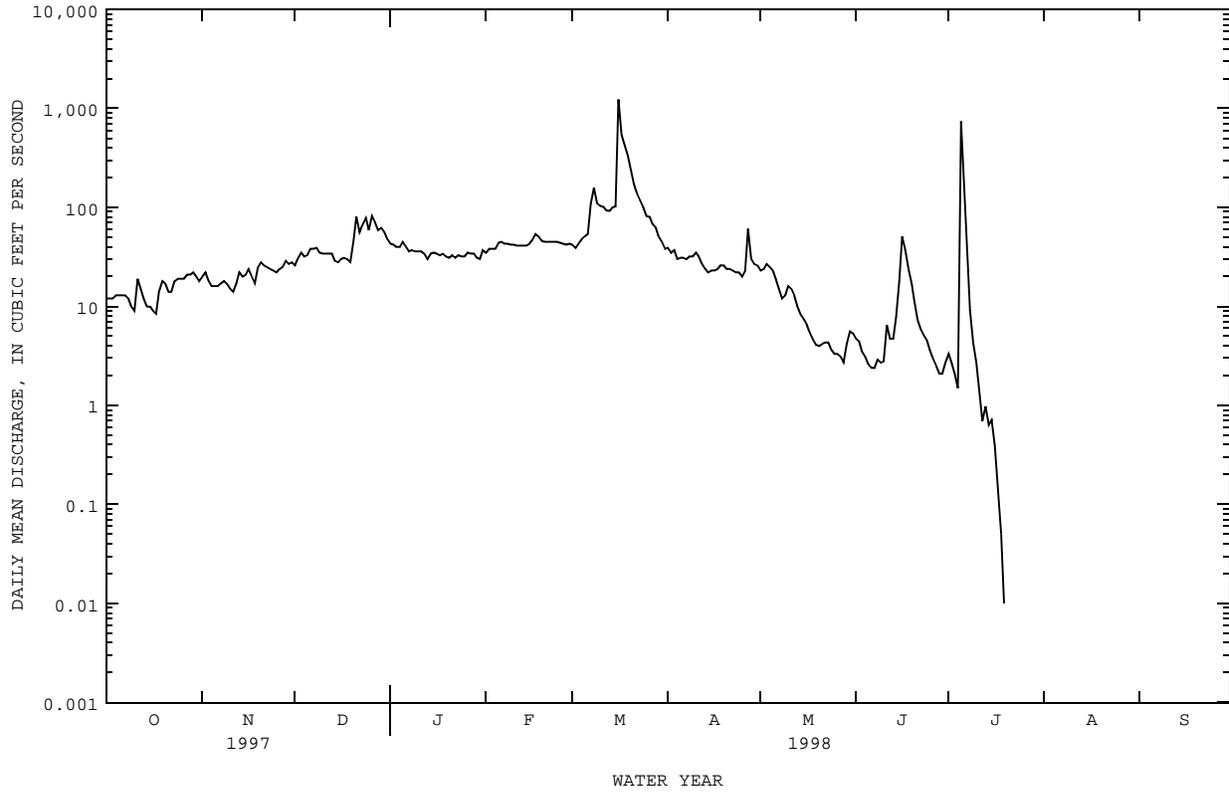
	264	80.1	78.5	61.9	162	94.6	176	549	427	161	207	248
MEAN	264	80.1	78.5	61.9	162	94.6	176	549	427	161	207	248
MAX	2866	1010	1593	689	4268	1066	3098	7312	2205	1417	6071	1997
(WY)	1942	1975	1992	1992	1992	1992	1957	1957	1957	1953	1978	1962
MIN	.000	.000	.000	.000	.000	.000	.000	4.90	.078	.000	.000	.000
(WY)	1944	1944	1944	1950	1950	1950	1952	1960	1974	1952	1952	1943

BRAZOS RIVER BASIN

08085500 CLEAR FORK BRAZOS RIVER AT FORT GRIFFIN, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1939 - 1998z	
ANNUAL TOTAL	60734.0		12120.14			
ANNUAL MEAN	166		33.2		209	
HIGHEST ANNUAL MEAN					1177	1957
LOWEST ANNUAL MEAN					8.78	1952
HIGHEST DAILY MEAN	4260	Jun 25	1230	Mar 16	72800	Aug 4 1978
LOWEST DAILY MEAN	8.4	Oct 17	.00	Jul 20	.00	May 11 1939
ANNUAL SEVEN-DAY MINIMUM	10	Sep 21	.00	Jul 20	.00	Sep 12 1939
INSTANTANEOUS PEAK FLOW			2580	Jul 5	149000	Aug 4 1978
INSTANTANEOUS PEAK STAGE			9.02	Jul 5	38.88	Aug 4 1978
ANNUAL RUNOFF (AC-FT)	120500		24040		151400	
10 PERCENT EXCEEDS	418		54		279	
50 PERCENT EXCEEDS	47		20		26	
90 PERCENT EXCEEDS	14		.00		.00	

z Period of regulated streamflow.



08086212 HUBBARD CREEK BELOW ALBANY, TX

LOCATION.--Lat 32°43'58", long 99°08'25", Shackelford County, Hydrologic Unit 12060105, on left bank 0.5 mi downstream from Salt Prong Hubbard Creek, 2.8 mi upstream from Newcomb Creek, 4.5 mi upstream from U.S. Highway 180, 9.1 mi east of Albany, 22.6 mi upstream from Hubbard Creek Reservoir, and 35.2 mi upstream from mouth.

DRAINAGE AREA.--613 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1966 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,184.99 ft above sea level. Prior to Jun 12, 1968, water-stage recorder at site 2.1 mi downstream at datum 7.63 ft lower. Satellite telemeter at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversions.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 16	1600	9,370	19.33	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.0	1.9	4.2	5.5	8.9	4.6	21	6.6	.68	.12	.00	.00
2	e.90	1.8	5.4	5.2	8.3	4.5	19	6.3	.52	.05	.00	.00
3	e.80	1.7	5.4	4.6	6.8	4.2	17	5.9	.58	.02	.00	.00
4	e.70	1.6	5.2	4.7	5.8	3.5	16	5.9	.74	.02	.00	.00
5	e.60	1.5	5.1	4.8	5.8	3.3	15	5.6	.79	.29	.00	.00
6	e.50	1.4	4.7	22	5.4	3.4	14	5.3	.79	.11	.00	.00
7	.41	1.4	4.9	17	5.3	4.1	14	4.8	1.0	.03	.00	.00
8	.47	1.3	7.5	13	5.0	9.8	13	4.8	1.1	.02	.00	.00
9	.62	1.3	7.3	9.9	4.8	11	13	4.5	.95	.01	.00	.00
10	.68	1.4	6.4	8.1	4.5	7.9	12	4.6	.99	.01	.00	.00
11	2.8	1.5	5.5	7.2	4.5	6.4	11	4.6	2.9	.01	.00	.00
12	4.1	1.9	4.9	6.7	4.7	6.0	9.8	3.7	13	.00	.00	.00
13	3.0	2.6	4.4	5.9	4.5	5.5	9.9	3.1	26	.00	.00	.00
14	2.5	3.6	4.1	5.5	4.5	5.1	9.7	2.8	8.4	.00	.00	.00
15	2.1	4.1	4.0	5.1	4.5	14	9.7	2.6	3.5	.00	.00	.00
16	1.7	4.5	3.8	4.4	4.9	5550	9.9	2.5	1.7	.00	.00	.00
17	1.5	4.1	3.7	4.3	5.6	2150	9.6	1.8	1.1	.00	.00	.00
18	1.3	3.5	3.5	4.2	5.4	272	9.0	1.7	.75	.00	.00	.00
19	1.3	3.0	3.3	3.9	5.3	151	8.7	1.6	.49	.00	.00	.00
20	1.3	2.8	4.7	3.3	4.9	101	8.2	1.4	.35	.00	.00	.00
21	1.3	2.9	32	3.7	4.7	79	7.9	1.2	.26	.00	.00	.00
22	1.3	2.9	22	12	6.3	68	8.3	1.1	.22	.00	.00	.00
23	6.0	2.9	25	14	7.9	59	8.1	1.0	.20	.00	.00	.00
24	12	2.6	20	9.2	7.1	51	7.6	1.0	e.20	.00	.00	.00
25	8.1	2.2	14	7.0	6.0	44	6.6	.99	.20	.00	.00	.00
26	5.4	2.3	14	5.9	5.8	40	6.5	.98	.18	.00	.00	.00
27	3.7	2.3	12	4.9	5.3	35	7.4	.93	.15	.00	.00	.00
28	2.6	2.8	9.4	4.3	4.8	32	7.7	.92	.15	.00	.00	.00
29	2.2	3.0	7.8	4.0	---	29	7.7	.72	.14	.00	.00	.00
30	2.0	3.6	6.7	3.7	---	26	6.9	.79	.16	.00	.00	.00
31	1.9	---	5.8	7.6	---	23	---	.72	---	.00	.00	---
TOTAL	74.78	74.4	266.7	221.6	157.3	8803.3	324.2	90.45	68.19	0.69	0.00	0.00
MEAN	2.41	2.48	8.60	7.15	5.62	284	10.8	2.92	2.27	.022	.000	.000
MAX	12	4.5	32	22	8.9	5550	21	6.6	26	.29	.00	.00
MIN	.41	1.3	3.3	3.3	4.5	3.3	6.5	.72	.14	.00	.00	.00
AC-FT	148	148	529	440	312	17460	643	179	135	1.4	.00	.00
CFSM	.00	.00	.01	.01	.01	.46	.02	.00	.00	.00	.00	.00
IN.	.00	.00	.02	.01	.01	.53	.02	.01	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1998, BY WATER YEAR (WY)

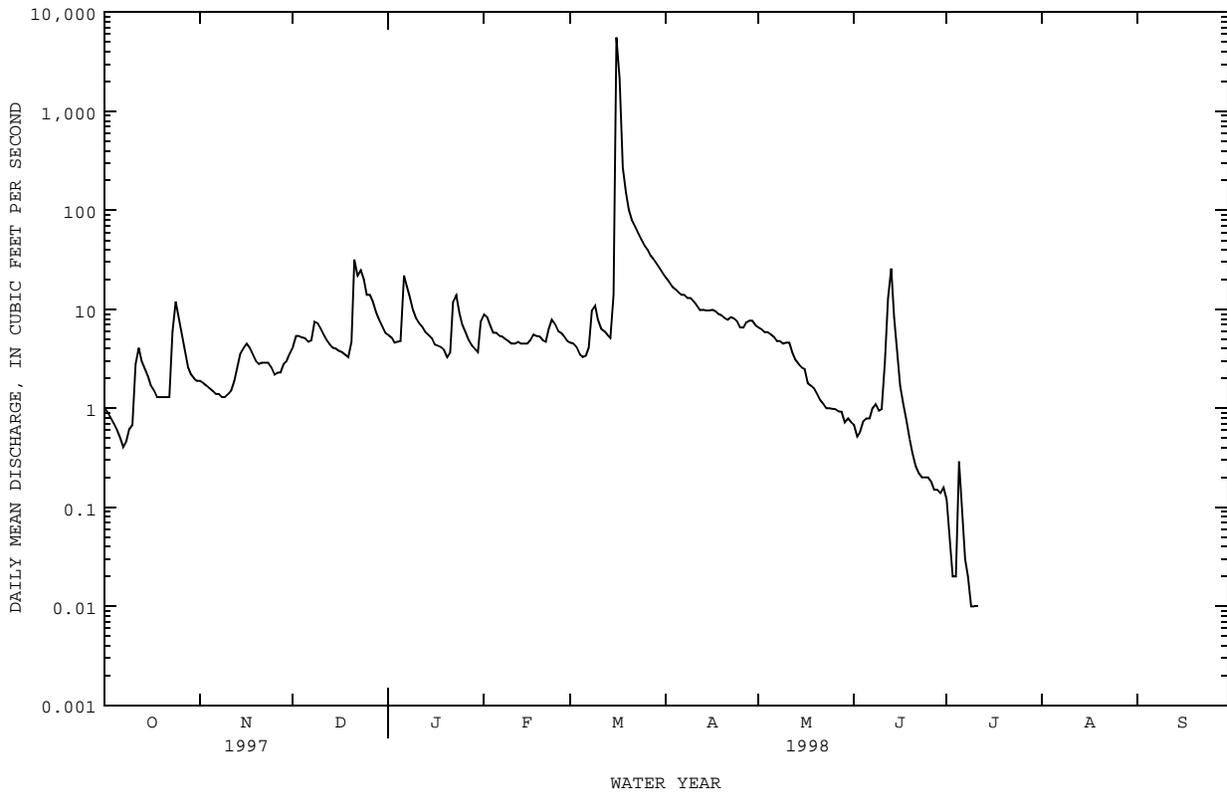
	1967	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
MEAN	96.1	17.0	49.7	60.9	83.5	51.9	55.4	137	63.7	6.69	118	77.7
MAX	1483	228	1161	1544	1532	284	502	906	628	46.1	3365	1170
(WY)	1982	1975	1992	1968	1998	1992	1968	1969	1997	1992	1978	1974
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1969	1971	1971	1969	1971	1971	1971	1984	1984	1974	1968	1968

BRAZOS RIVER BASIN

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1967 - 1998	
ANNUAL TOTAL	52443.78		10081.61		68.2	
ANNUAL MEAN	144		27.6		303	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	9420	Jun 23	5550	Mar 16	94700	Aug 4 1978
LOWEST DAILY MEAN	.41	Oct 7	.00	Jul 12	.00	Apr 5 1967
ANNUAL SEVEN-DAY MINIMUM	.57	Oct 4	.00	Jul 12	.00	Apr 24 1967
INSTANTANEOUS PEAK FLOW			9370	Mar 16	c330000	Aug 4 1978
INSTANTANEOUS PEAK STAGE			19.33	Mar 16	a41.41	Aug 4 1978
ANNUAL RUNOFF (AC-FT)	104000		20000		49410	
ANNUAL RUNOFF (CFSM)	.23		.045		.11	
ANNUAL RUNOFF (INCHES)	3.18		.61		1.51	
10 PERCENT EXCEEDS	180		13		49	
50 PERCENT EXCEEDS	16		3.0		1.4	
90 PERCENT EXCEEDS	2.0		.00		.00	

e Estimated
 a From floodmark.
 c From rating curve extended above 110 ft³/s on basis of step-backwater method and computation of flow-through-culverts, contracted-openings, and flow-over-road determination of 330,000 ft³/s at site 4.5 mi downstream.



08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Oct 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Oct 1966 to current year.

WATER TEMPERATURE: Oct 1966 to Jul 1980, Oct 1983 to current year.

INSTRUMENTATION.--Dec 1970 to Mar 1982, specific conductance continuously recorded at this station. Since Mar 1982, specific conductance and water temperature continuously recorded at this station.

REMARKS.--Record good except for estimated specific conductance and water temperature values, which are poor, and specific conductance values for Mar 17 to Apr 13, which are fair. Interruptions in the specific conductance and water temperature values were due to malfunctions of the instrument. No flow Jul 12 to Sep 30. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1989 to 1998. The standard error of estimate for dissolved solids is 4%, chloride is 11%, sulfate is 65% and for hardness is 10%. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 21,200 microsiemens, Feb 15, 21, 1978; minimum measured, 180 microsiemens, Oct 27, 1984, May 13, 1985 and Oct 6, 1986; minimum estimated, 129 microsiemens, Aug 4, 1978.

WATER TEMPERATURE (1966-80, 1983-current year): Maximum, 37.5°C, Jul 20, 1986; minimum, 0.0°C, on several days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,920 microsiemens, Oct 11; minimum, 286 microsiemens, Mar 17.

WATER TEMPERATURE: Maximum, 35.0°C, Jul 3; minimum, 3.0°C, Dec 13.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT									
07...	1125	.38	3670	24.0	740	590	170	75	478
DEC									
03...	1310	5.4	3190	12.0	720	500	170	74	410
FEB									
03...	0935	6.8	2760	9.5	660	470	160	66	326
APR									
13...	1435	9.9	2110	21.5	510	300	130	46	226
MAY									
28...	1433	1.0	3180	28.5	660	490	150	68	399

DATE	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT								
07...	8	6.1	150	370	890	.41	9.1	2090
DEC								
03...	7	4.8	220	400	710	.39	5.5	1900
FEB								
03...	6	4.3	190	320	630	.31	4.7	1630
APR								
13...	4	4.6	200	180	440	.32	6.4	1150
MAY								
28...	7	5.6	160	300	760	.38	5.3	1790

BRAZOS RIVER BASIN

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1997 TO SEPTEMBER 1998

MONTH YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- SIEMENS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1997	74.78	3420	1940	392	840	169	290	58.9	760
NOV. 1997	74.4	3420	1940	390	840	168	290	58.6	760
DEC. 1997	266.7	3280	1860	1340	800	573	280	202	730
JAN. 1998	221.6	3280	1860	1110	800	476	280	168	730
FEB. 1998	157.3	2960	1670	709	700	297	260	109	670
MAR. 1998	8803.3	1010	561	13340	210	5000	95	2250	250
APR. 1998	324.2	2130	1190	1040	480	416	190	168	510
MAY 1998	90.45	2680	1510	369	620	152	240	57.6	620
JUNE 1998	68.19	2420	1360	250	550	102	210	39.4	570
JULY 1998	0.69	3010	1700	3.2	720	1.3	260	0.49	690
AUG. 1998	0	--	--	--	--	--	--	--	--
SEPT 1998	0	--	--	--	--	--	--	--	--
TOTAL	10081.61	**	**	18950	**	7350	**	3120	**
WTD.AVG.	28	1250	696	**	270	**	110	**	300

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3530	3410	3470	3340	3230	3280	3590	3380	3520	3040	2850	2970
2	3460	3420	3440	3400	3310	3350	3470	3380	3430	3100	2990	3070
3	3530	3440	3470	3390	3350	3370	3880	3290	3500	3150	3020	3090
4	3580	3260	3500	3390	3310	3350	3730	3410	3520	3210	3000	3060
5	3630	3480	3560	3380	3330	3360	3720	3540	3640	3240	3110	3200
6	3700	3340	3590	3390	3350	3380	3780	3560	3710	3460	3200	3300
7	3740	3530	3620	3420	3360	3390	3680	3410	3590	3570	3370	3460
8	3760	3570	3680	3430	3360	3410	3440	3010	3230	3770	3400	3550
9	3800	3590	3690	3440	3410	3430	3480	3210	3320	3560	3260	3380
10	3810	3670	3740	3460	3420	3440	3860	3480	3650	3670	3350	3500
11	3920	3580	3710	3470	3440	3450	3860	3810	3830	3850	3500	3590
12	3580	3420	3480	3490	3450	3460	3820	3780	3800	3870	3060	3370
13	3520	3490	3500	3560	3450	3520	3830	3350	3530	3790	3330	3690
14	3560	3500	3530	3580	3460	3530	3700	3380	3510	3790	3160	3450
15	3590	3540	3570	3670	3540	3620	3600	3400	3520	3590	3340	3480
16	3610	3550	3580	3640	3270	3410	3640	3450	3500	3440	3340	3400
17	3630	3570	3610	3390	3270	3360	3670	3320	3560	3470	3320	3390
18	3670	3600	3640	3330	3250	3300	3520	3320	3470	3480	3330	3380
19	3690	3620	3660	3280	3230	3270	3580	3490	3540	3500	3160	3340
20	3720	3630	3690	3360	3220	3290	3550	3380	3500	3370	3290	3340
21	3740	3700	3710	3520	3350	3410	3590	3250	3400	3350	3160	3300
22	3750	3700	3720	3590	3370	3500	3630	2890	3220	3350	3140	3300
23	3720	3280	3500	3390	3300	3360	3440	2730	3220	3250	2940	3100
24	3330	3230	3280	3390	3300	3350	3330	2620	2940	3170	2910	2970
25	3420	3120	3260	3470	3390	3440	3240	2810	3020	3120	3020	3070
26	3430	3320	3380	3500	3410	3450	3340	2940	3170	3200	3030	3120
27	3330	3260	3300	3580	3500	3540	2950	2540	2740	3200	2980	3070
28	3260	3160	3200	3570	3460	3510	3310	2730	3080	3100	3030	3060
29	3230	3170	3200	3460	3300	3380	3240	2780	2990	3130	3000	3060
30	3240	3180	3220	3560	3430	3510	3240	2810	2970	3150	3000	3090
31	3260	3180	3220	---	---	---	3190	2940	3050	3050	2890	2980
MONTH	3920	3120	3510	3670	3220	3410	3880	2540	3380	3870	2850	3260

BRAZOS RIVER BASIN

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3110	2930	3010	3140	3100	3120	1800	1730	1780	2520	2430	2470
2	3100	2860	2990	3120	3020	3080	1880	1800	1830	2520	2440	2490
3	3050	2820	2920	3140	3090	3120	1940	1880	1910	2560	2500	2530
4	3050	3020	3040	3120	3050	3080	1950	1920	1930	2570	2510	2540
5	3030	2970	3000	3150	3070	3090	1960	1920	1940	2580	2530	2550
6	3040	2990	3010	3220	3120	3190	2000	1950	1970	2590	2560	2580
7	3000	2750	2840	3240	2990	3160	2030	1990	2000	2630	2560	2600
8	2970	2740	2820	3190	2990	3110	2040	2000	2020	2650	2610	2630
9	2960	2730	2830	3120	3020	3070	2070	2020	2050	2690	2640	2670
10	3050	2780	2870	3160	3060	3110	2090	2030	2070	2730	2660	2690
11	3050	2890	2950	3200	2720	2950	2140	2080	2100	2740	2700	2720
12	2970	2760	2870	3270	3080	3170	2170	2130	2150	2750	2700	2730
13	3000	2830	2940	3080	2890	2970	2190	2120	2160	2780	2730	2750
14	2880	2830	2860	2900	2850	2880	2180	2140	2160	2810	2760	2780
15	2920	2880	2900	2950	2380	2840	2200	2150	2180	2820	2780	2800
16	3040	2870	2930	2980	292	1210	2240	2200	2210	2830	2780	2810
17	3110	3000	3050	575	286	408	2260	2240	2240	2870	2820	2850
18	3100	2870	2940	754	575	672	2300	2230	2260	2890	2840	2870
19	3070	2890	2960	872	754	813	2310	2280	2300	e2900	e2870	2890
20	3080	2900	2980	983	872	930	2350	2300	2330	e2920	e2880	2900
21	2980	2900	2950	1080	983	1040	2370	2330	2350	2960	2910	2920
22	3010	2960	2980	1190	1080	1130	2420	2360	2380	3000	2950	2970
23	3080	2800	2930	1260	1190	1220	2420	2370	2400	3040	2990	3020
24	3050	2870	2960	1350	1260	1300	2440	2400	2420	3040	2950	3010
25	3000	2970	2980	1400	1350	1360	2440	2400	2420	3080	2980	3030
26	3070	2940	2980	1450	1390	1410	2520	2290	2440	3100	2990	3040
27	3110	3030	3050	1510	1440	1460	2500	2440	2460	3100	3020	3060
28	3120	3090	3110	1570	1490	1520	2500	2430	2480	3120	3030	3090
29	---	---	---	1640	1570	1600	2500	2450	2480	3180	3040	3120
30	---	---	---	1690	1620	1650	2500	2430	2470	3210	3090	3140
31	---	---	---	1730	1690	1710	---	---	---	3220	3110	3170
MONTH	3120	2730	2950	3270	286	2110	2520	1730	2200	3220	2430	2820

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3290	3150	3200	2990	2870	2910	---	---	---	---	---	---
2	3320	3160	3240	2990	2880	2930	---	---	---	---	---	---
3	3330	3170	3250	3150	2910	2970	---	---	---	---	---	---
4	3320	3230	3280	3150	2970	3030	---	---	---	---	---	---
5	3360	3230	3270	3170	2970	3060	---	---	---	---	---	---
6	3420	3310	3370	3110	2970	3030	---	---	---	---	---	---
7	3720	3300	3410	3130	2970	3040	---	---	---	---	---	---
8	3410	3250	3290	3060	2990	3020	---	---	---	---	---	---
9	3290	3230	3260	3090	3000	3030	---	---	---	---	---	---
10	3330	3260	3290	3150	3030	3060	---	---	---	---	---	---
11	3330	2670	2930	3170	3070	3100	---	---	---	---	---	---
12	3030	884	2730	---	---	---	---	---	---	---	---	---
13	2170	1280	1990	---	---	---	---	---	---	---	---	---
14	2350	2010	2150	---	---	---	---	---	---	---	---	---
15	2470	2290	2350	---	---	---	---	---	---	---	---	---
16	2490	2380	2430	---	---	---	---	---	---	---	---	---
17	2470	2410	2430	---	---	---	---	---	---	---	---	---
18	2540	2460	2500	---	---	---	---	---	---	---	---	---
19	2600	2510	2550	---	---	---	---	---	---	---	---	---
20	2670	2570	2610	---	---	---	---	---	---	---	---	---
21	2710	2590	2650	---	---	---	---	---	---	---	---	---
22	2760	2590	2670	---	---	---	---	---	---	---	---	---
23	---	---	2700	---	---	---	---	---	---	---	---	---
24	---	---	e2700	---	---	---	---	---	---	---	---	---
25	---	---	2750	---	---	---	---	---	---	---	---	---
26	2890	2720	2770	---	---	---	---	---	---	---	---	---
27	2940	2740	2830	---	---	---	---	---	---	---	---	---
28	2910	2790	2840	---	---	---	---	---	---	---	---	---
29	2950	2820	2880	---	---	---	---	---	---	---	---	---
30	2940	2830	2880	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	2840	---	---	---	---	---	---	---	---	---

e Estimated

BRAZOS RIVER BASIN

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	28.3	23.7	25.9	18.7	15.7	17.0	12.9	11.9	12.3	8.7	5.4	7.0
2	27.3	23.6	25.6	17.6	14.6	15.9	12.3	11.7	12.0	12.2	7.9	9.8
3	26.8	23.5	25.2	16.9	13.1	14.8	12.4	9.7	11.4	12.1	10.0	10.9
4	27.1	23.0	24.8	16.6	13.2	14.8	11.8	8.3	10.0	12.8	11.3	12.0
5	26.6	23.0	25.0	17.6	14.3	15.7	10.7	8.3	9.5	11.8	10.5	11.2
6	26.1	23.4	24.6	17.0	13.2	14.9	9.6	8.6	9.0	11.4	10.1	10.9
7	25.6	23.2	24.2	15.4	12.1	13.9	9.1	8.4	8.9	10.2	8.4	9.4
8	26.3	23.3	24.5	15.3	12.6	14.0	12.1	7.9	10.0	10.5	7.8	8.7
9	29.7	23.6	26.1	14.6	13.0	14.1	11.5	9.6	10.4	10.1	6.8	8.2
10	27.2	24.4	25.7	13.0	10.3	11.9	10.5	8.2	9.3	8.2	7.1	7.8
11	25.4	24.3	24.7	11.8	9.2	10.6	9.1	7.3	7.9	9.1	7.0	7.9
12	24.6	22.5	23.9	11.1	10.2	10.5	8.0	6.3	7.2	11.6	7.6	9.4
13	23.2	20.4	21.9	10.7	10.2	10.5	8.4	3.0	6.0	9.2	7.2	7.7
14	22.9	18.5	20.6	10.6	9.1	10.1	8.8	3.5	6.6	9.4	6.3	7.6
15	22.9	17.8	20.3	10.8	8.5	9.4	9.0	3.8	7.1	9.6	5.8	7.5
16	22.2	17.7	20.0	10.5	6.1	8.6	9.4	6.5	7.9	10.2	6.5	8.2
17	22.4	17.9	20.0	8.6	7.5	8.1	8.6	6.7	7.7	9.3	5.7	7.9
18	20.8	17.1	19.1	10.8	7.0	8.6	9.6	6.7	8.0	11.3	7.7	9.3
19	23.4	17.7	20.2	9.8	7.6	8.8	9.9	7.6	8.7	9.4	7.5	8.7
20	22.3	18.7	20.1	12.0	8.7	10.2	9.5	7.7	8.7	11.2	8.0	9.4
21	19.6	16.8	18.2	12.2	9.8	10.9	8.0	6.8	7.5	9.8	8.2	9.1
22	18.9	15.6	17.2	12.2	9.7	11.0	8.2	5.9	6.9	9.1	7.4	8.2
23	19.5	16.6	17.7	11.9	9.2	10.6	7.1	6.1	6.8	9.4	6.7	7.7
24	20.4	16.6	18.2	12.9	9.9	11.3	8.1	5.5	6.6	9.3	5.9	7.5
25	19.0	15.9	17.6	15.1	10.8	12.8	7.4	5.4	6.4	9.7	7.2	8.4
26	16.8	13.5	15.0	15.1	12.9	13.9	7.5	5.4	6.4	11.2	7.5	9.3
27	16.2	12.8	14.4	14.6	13.0	13.8	7.6	4.2	6.1	10.6	6.5	8.7
28	15.7	13.4	14.8	16.4	14.1	14.9	7.6	5.1	6.3	11.9	8.2	9.9
29	16.7	14.1	15.6	14.2	12.3	13.1	7.7	3.5	5.7	12.1	8.3	10.1
30	19.2	15.4	17.2	13.8	11.3	12.6	8.7	4.2	6.4	11.4	8.2	9.8
31	19.0	15.3	17.2	---	---	---	7.9	4.7	6.6	12.9	10.6	11.4
MONTH	29.7	12.8	20.8	18.7	6.1	12.2	12.9	3.0	8.1	12.9	5.4	9.0
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.2	10.8	11.5	14.5	9.9	11.9	21.5	17.7	19.5	25.4	18.3	21.5
2	13.6	9.3	11.2	14.2	9.7	11.8	21.7	18.0	19.6	26.6	20.2	23.0
3	13.1	9.2	11.0	13.6	9.5	11.4	20.0	17.0	18.3	25.3	20.2	22.6
4	10.9	9.5	10.1	16.3	10.9	13.5	20.5	16.5	18.0	25.7	20.3	22.8
5	9.5	8.8	9.3	15.4	13.0	13.9	21.1	16.7	18.6	27.7	21.7	24.5
6	9.0	8.0	8.5	13.1	11.2	11.7	20.5	17.8	19.0	26.6	22.1	24.3
7	9.9	5.9	8.1	12.6	10.8	11.6	21.7	17.0	19.2	28.4	21.8	24.9
8	11.8	7.6	9.5	12.0	9.2	10.3	21.2	17.5	19.0	25.7	22.3	24.1
9	13.0	8.1	10.5	12.1	8.4	9.8	21.6	17.0	18.8	27.1	22.2	24.3
10	11.9	9.8	10.9	12.4	7.1	9.6	22.5	17.3	19.6	28.3	21.3	24.5
11	12.8	8.4	10.3	11.9	7.0	9.4	22.0	18.2	19.9	25.5	22.1	23.8
12	10.3	8.6	9.3	9.5	6.9	8.4	22.5	17.7	19.9	28.2	22.0	24.7
13	10.7	8.9	9.6	10.8	8.6	9.7	23.3	18.6	20.7	27.7	23.9	25.6
14	10.2	9.0	9.7	12.1	10.4	11.1	23.8	18.9	21.2	29.0	24.5	26.5
15	11.6	10.0	10.6	12.8	11.6	12.1	25.0	20.2	22.2	27.7	24.3	26.0
16	11.8	10.5	11.0	12.6	11.5	12.2	22.8	18.9	20.8	28.2	22.9	25.5
17	11.2	9.7	10.4	12.8	11.5	12.2	19.6	17.8	18.7	27.2	24.6	25.8
18	10.6	8.5	9.7	14.6	12.5	13.5	22.1	16.8	19.0	28.2	24.2	26.2
19	11.9	9.5	10.4	14.0	12.9	13.6	22.6	16.8	19.4	28.5	24.6	26.5
20	11.9	9.0	10.7	13.0	11.7	12.5	21.7	17.6	19.1	28.8	24.8	26.6
21	11.5	10.4	10.8	12.7	12.0	12.4	22.0	16.3	18.8	27.5	25.5	26.7
22	11.8	9.9	10.8	14.8	12.3	13.3	22.2	16.4	18.9	27.0	24.6	25.8
23	13.6	9.3	11.5	16.4	12.8	14.6	22.9	16.7	19.6	26.8	23.8	25.3
24	14.6	10.2	12.5	18.9	14.7	16.4	23.4	18.5	20.8	27.1	23.8	25.4
25	16.8	12.7	14.5	19.2	16.2	17.8	23.8	18.3	21.0	27.1	23.8	25.6
26	15.8	12.4	14.1	20.4	17.9	19.0	23.2	20.2	21.4	29.2	23.8	26.4
27	15.6	11.3	13.2	20.5	18.3	19.4	21.7	19.2	20.4	30.4	24.2	26.9
28	14.6	11.2	12.7	21.6	18.3	20.0	21.2	17.8	19.3	30.3	25.2	27.8
29	---	---	---	21.7	19.2	20.4	22.1	16.6	19.2	30.0	26.0	28.1
30	---	---	---	22.2	19.4	20.5	23.7	17.1	20.2	29.9	25.6	27.8
31	---	---	---	21.4	18.0	19.7	---	---	---	30.2	25.4	27.9
MONTH	16.8	5.9	10.8	22.2	6.9	13.7	25.0	16.3	19.7	30.4	18.3	25.4

BRAZOS RIVER BASIN

08086212 HUBBARD CREEK BELOW ALBANY, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	30.3	26.3	28.2	33.2	29.0	30.7	---	---	---	---	---	---
2	29.7	24.4	27.3	32.5	28.9	30.3	---	---	---	---	---	---
3	30.5	25.5	28.0	35.0	28.3	30.9	---	---	---	---	---	---
4	31.8	26.7	28.9	30.2	28.6	29.3	---	---	---	---	---	---
5	28.1	23.5	25.3	29.8	26.8	28.3	---	---	---	---	---	---
6	29.1	21.9	24.8	32.8	27.5	29.7	---	---	---	---	---	---
7	26.3	22.2	23.8	33.1	28.6	30.8	---	---	---	---	---	---
8	25.9	23.0	24.4	34.1	28.8	31.1	---	---	---	---	---	---
9	27.8	23.9	26.0	33.3	29.0	30.8	---	---	---	---	---	---
10	27.3	25.2	26.4	33.0	29.2	31.0	---	---	---	---	---	---
11	28.4	23.3	25.9	32.7	28.8	30.5	---	---	---	---	---	---
12	30.1	22.6	27.0	---	---	---	---	---	---	---	---	---
13	30.9	24.5	28.0	---	---	---	---	---	---	---	---	---
14	31.6	26.9	29.1	---	---	---	---	---	---	---	---	---
15	31.3	26.0	28.6	---	---	---	---	---	---	---	---	---
16	29.9	25.8	28.1	---	---	---	---	---	---	---	---	---
17	29.8	26.4	28.1	---	---	---	---	---	---	---	---	---
18	30.9	26.3	28.6	---	---	---	---	---	---	---	---	---
19	31.4	27.2	29.4	---	---	---	---	---	---	---	---	---
20	31.7	27.2	29.4	---	---	---	---	---	---	---	---	---
21	30.6	26.1	28.4	---	---	---	---	---	---	---	---	---
22	30.9	25.6	28.6	---	---	---	---	---	---	---	---	---
23	---	---	29.0	---	---	---	---	---	---	---	---	---
24	---	---	e29.0	---	---	---	---	---	---	---	---	---
25	---	---	29.0	---	---	---	---	---	---	---	---	---
26	31.2	27.4	29.3	---	---	---	---	---	---	---	---	---
27	32.8	28.3	30.4	---	---	---	---	---	---	---	---	---
28	34.4	29.0	31.4	---	---	---	---	---	---	---	---	---
29	32.8	29.1	30.9	---	---	---	---	---	---	---	---	---
30	32.3	28.5	30.3	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	28.1	---	---	---	---	---	---	---	---	---

e Estimated

BRAZOS RIVER BASIN

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX

LOCATION.--Lat 32°38'54", long 99°00'15", Stephens County, Hydrologic Unit 12060105, on left bank 600 ft downstream from Battle Creek, 1.6 mi upstream from bridge on Farm Road 576, 9.8 mi southwest of Breckenridge, and about 14.6 mi upstream from Hubbard Creek Dam.

DRAINAGE AREA.--280 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Feb 1962 to current year. Prior to Oct 1975, published as "near Breckenridge."

REVISED RECORDS.--WDR TX-76-2: Drainage area at former site.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,185.83 ft above sea level. Prior to Oct 1, 1975, at site 1.6 mi downstream at datum 7.41 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to information from State Department of Highways and Public Transportation, the floods of May 16, 1949, Jul 20, 1953, and Apr 29, 1957, each reached a stage of 24.6 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 16	1430	5,870	22.93	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.07	.32	.37	15	1.2	7.5	.80	.10	.17	.00	.00
2	.10	.05	.48	.32	3.9	1.1	7.0	.76	.07	.14	.00	.00
3	.15	.09	.47	.24	3.5	1.0	6.5	.60	.07	.08	.00	.00
4	.17	.13	.30	.24	2.3	.97	5.8	.53	.06	.10	.00	.00
5	.09	.06	.25	3.4	2.0	.85	5.5	.50	.06	66	.00	.00
6	.05	.05	.17	61	1.5	.82	5.5	.43	.06	40	.00	.00
7	.12	.10	.33	18	1.2	15	4.6	.34	.47	2.9	.00	.00
8	.10	.12	.53	8.7	1.1	24	4.3	.32	1.0	.39	.00	.00
9	.07	.12	.44	5.6	1.1	22	4.7	.29	.28	.09	.00	.00
10	.04	.10	.56	3.2	1.2	9.4	4.4	.24	.19	.02	.00	.00
11	.48	.10	.44	2.1	1.2	4.7	3.4	.28	3.8	.00	.00	.00
12	.09	.30	.37	1.7	1.5	3.1	2.5	.26	1.0	.00	.00	.00
13	.10	.60	.20	1.5	1.8	2.4	2.1	.22	1.0	.03	.00	.00
14	.02	.28	.20	1.2	1.9	2.3	2.0	.23	.28	.02	.00	.00
15	.01	.15	.30	.98	2.3	18	2.5	.22	.13	.00	.00	.00
16	.02	.15	.34	.86	5.7	3750	1.9	.20	.09	.00	.00	.00
17	.02	.37	.33	.82	7.6	1300	1.8	.20	.11	.00	.00	.00
18	.03	.63	.35	.79	6.2	166	2.0	.18	.11	.00	.00	.00
19	.03	.79	.32	.73	5.2	93	1.8	.16	.11	.00	.00	.00
20	.04	.60	8.7	.76	3.5	65	1.9	.17	.10	.00	.00	.00
21	.05	.38	27	1.1	4.0	48	1.7	.20	.11	.00	.00	.00
22	.06	.25	17	15	22	38	1.5	.21	.12	.00	.00	.00
23	3.4	.21	4.1	2.7	21	31	1.6	.19	.13	.00	.00	.00
24	.08	.39	4.4	1.2	7.6	25	1.4	.19	.13	.00	.00	.00
25	.02	.73	4.6	.91	3.6	21	1.1	.18	.15	.00	.00	.00
26	.01	.96	2.6	.86	2.1	17	.96	.20	.16	.00	.00	.00
27	.02	.80	1.7	.82	1.6	14	.88	.34	.17	.00	.00	.00
28	.12	.84	.96	.79	1.4	13	.87	.30	.18	.00	.00	.00
29	.17	.44	.88	.72	---	11	.95	.21	.18	.00	.00	.00
30	.19	.26	.70	.70	---	9.3	.86	.16	.19	.00	.00	.00
31	.21	---	.54	25	---	9.9	---	.13	---	.00	.00	---
TOTAL	6.13	10.12	79.88	162.31	133.0	5718.04	89.52	9.24	10.61	109.94	0.00	0.00
MEAN	.20	.34	2.58	5.24	4.75	184	2.98	.30	.35	3.55	.000	.000
MAX	3.4	.96	27	61	22	3750	7.5	.80	3.8	66	.00	.00
MIN	.01	.05	.17	.24	1.1	.82	.86	.13	.06	.00	.00	.00
AC-FT	12	20	158	322	264	11340	178	18	21	218	.00	.00
CFSM	.00	.00	.01	.02	.02	.66	.01	.00	.00	.01	.00	.00
IN.	.00	.00	.01	.02	.02	.76	.01	.00	.00	.01	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

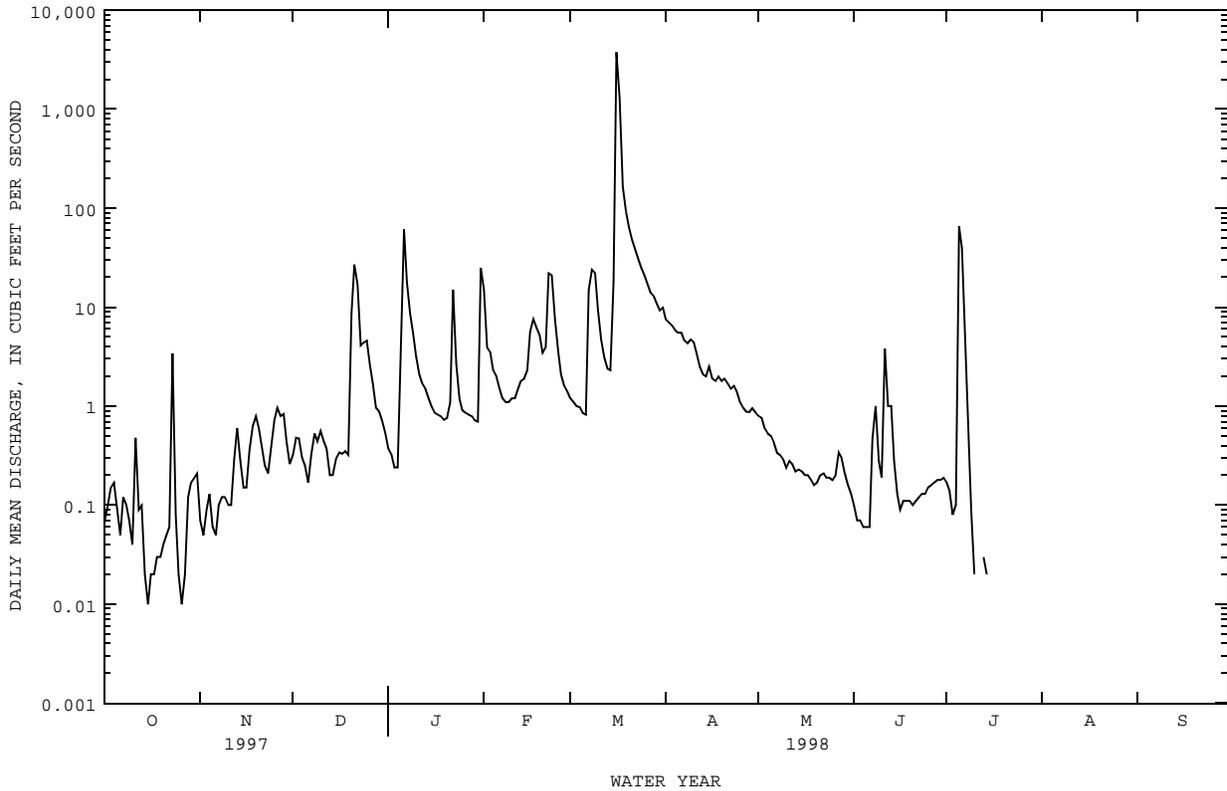
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	53.5	15.1	16.8	18.9	31.2	31.1	29.7	66.8	41.8	6.48	18.6	31.1	1151	155	342	547	455	255	209	414	406	51.4	211	396	(WY)	1982	1965	1992	1968	1992	1992	1990	1965	1997	1962	1978	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	(WY)	1969	1971	1971	1971	1962	1966	1980	1984	1964	1964	1980	1968

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	29989.76		6328.79		30.1	
ANNUAL MEAN	82.2		17.3		114	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					2.47	
HIGHEST DAILY MEAN	6660	Jun 23	3750	Mar 16	28100	Oct 13 1981
LOWEST DAILY MEAN	.01	Oct 15	.00	Jul 11	.00	Feb 1 1962
ANNUAL SEVEN-DAY MINIMUM	.02	Oct 14	.00	Jul 15	.00	Feb 1 1962
INSTANTANEOUS PEAK FLOW			5870	Mar 16	180000	Oct 13 1981
INSTANTANEOUS PEAK STAGE			22.93	Mar 16	a28.60	Oct 13 1981
ANNUAL RUNOFF (AC-FT)	59480		12550		21830	
ANNUAL RUNOFF (CFSM)	.29		.062		.11	
ANNUAL RUNOFF (INCHES)	3.98		.84		1.46	
10 PERCENT EXCEEDS	85		7.5		16	
50 PERCENT EXCEEDS	2.8		.28		.08	
90 PERCENT EXCEEDS	.10		.00		.00	

a From floodmark.

i From field determination, based on 2-section slope-area measurement of peak flow.



BRAZOS RIVER BASIN

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Nov 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Nov 1975 to current year.

WATER TEMPERATURE: Nov 1975 to current year.

INSTRUMENTATION.--Since Mar 1982, specific conductance and water temperature are continuously recorded at this station.

REMARKS.--No estimated mean specific conductance and water temperature values. Records good except for Mar 16 to Apr 14 and Jul 7 to Aug 4, which are fair. Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and a regression relation between each chemical constituent and specific conductance. New regression equations were developed based on data from water years 1989 to 1998. The standard error of estimate for dissolved solids is 3%, chloride is 69%, sulfate is 25% and for hardness is 19%. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request. Prior to Nov 1975, this station was published as 08086300 Big Sandy Creek near Breckenridge.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 28,700 microsiemens Apr 5, 10, 1976; minimum 95 microsiemens, Oct 13, 1981.

WATER TEMPERATURE: Maximum, 37.0°C, Aug 9, 1987, Jul 16, 1989; minimum, 0.0°C, Jan 9, 10, 1977, Dec 2, 3, 1985.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 12,100 microsiemens, Jul 5; minimum, 263 microsiemens, Mar 16.

WATER TEMPERATURE: Maximum, 35.8°C, Jul 13; minimum, 2.3°C, Dec 14.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
OCT									
07...	1525	.18	9880	23.5	1700	1600	500	121	1480
DEC									
03...	1000	.53	9290	10.0	1600	1400	460	117	1420
FEB									
04...	1035	2.2	3950	8.5	760	610	220	53	520
APR									
14...	0920	2.0	4460	17.0	940	730	280	58	553
MAY									
28...	1255	.34	8060	26.0	1400	1300	400	101	1170

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
OCT								
07...	15	5.2	150	670	3100	.24	10	5970
DEC								
03...	15	5.9	230	670	2800	.20	5.4	5650
FEB								
04...	8	5.9	150	290	1100	.19	4.2	2250
APR								
14...	8	5.7	210	320	1100	.17	4.5	2500
MAY								
28...	14	5.9	150	540	2500	.19	5.0	4780

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

MONTHLY AND ANNUAL MEANS AND LOADS FOR OCTOBER 1997 TO SEPTEMBER 1998

MONTH YEAR	DISCHARGE (CFS-DAYS)	SPECIFIC CONDUCT- ANCE (MICRO- SIEMENS)	DIS- SOLVED SOLIDS (MG/L)	DIS- SOLVED SOLIDS (TONS)	DIS- SOLVED CHLORIDE (MG/L)	DIS- SOLVED CHLORIDE (TONS)	DIS- SOLVED SULFATE (MG/L)	DIS- SOLVED SULFATE (TONS)	HARDNESS (CA, MG) (MG/L)
OCT. 1997	6.13	7930	4650	77.0	2300	38.9	490	8.1	1500
NOV. 1997	10.12	9650	5750	157	2900	80.6	590	16.1	1800
DEC. 1997	79.88	4970	2860	617	1400	304	310	67.0	950
JAN. 1998	162.31	2690	1510	661	720	314	170	75.0	520
FEB. 1998	133	3270	1840	660	880	315	210	74.6	640
MAR. 1998	5718.04	669	366	5660	170	2610	43	666	130
APR. 1998	89.52	4210	2380	575	1100	277	270	64.2	810
MAY 1998	9.24	6950	4040	101	2000	50.2	430	10.8	1300
JUNE 1998	10.61	6630	3850	110	1900	54.8	410	11.8	1200
JULY 1998	109.94	6280	3700	1100	1900	556	380	114	1200
AUG. 1998	0	--	--	--	--	--	--	--	--
SEPT 1998	0	--	--	--	--	--	--	--	--
TOTAL	6328.79	**	**	9710	**	4600	**	1110	**
WTD.AVG.	17	1020	568	**	270	**	65	**	200

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9620	9420	9530	10300	10200	10200	9320	9020	9120	5450	4990	5220
2	9790	9530	9650	10200	10100	10200	9470	9260	9370	5610	5340	5510
3	9940	9720	9850	10200	10000	10100	9670	9010	9380	5860	5580	5760
4	10100	9930	10000	10100	9890	10000	9730	9520	9620	6260	5750	5960
5	10300	10100	10200	10200	9910	10100	10100	9610	9800	6480	1520	5910
6	10400	10200	10300	10100	10000	10100	10100	9750	9920	2490	1250	1870
7	10200	9950	10200	10300	10100	10200	10300	10100	10200	1870	1590	1730
8	10100	9800	10000	10300	10200	10200	10200	9400	9670	1970	1580	1670
9	9810	9000	9660	10300	9890	10100	9880	9590	9690	3400	1960	2410
10	9000	8690	8800	10100	9600	9820	10000	9820	9940	4300	3400	4050
11	8740	7100	7460	10500	10000	10200	10100	9880	10000	4050	3840	3930
12	7630	7270	7490	10500	9300	9870	10200	10100	10100	4300	3840	4060
13	8090	7520	7920	9650	9410	9500	10800	10200	10500	4380	3880	4090
14	8210	8060	8140	9540	9160	9330	10800	10500	10600	4660	4070	4390
15	8440	8200	8360	9470	9030	9220	10800	10500	10600	4950	4480	4630
16	8670	8420	8590	9530	9320	9420	10900	10500	10700	5300	4700	4900
17	9250	8650	8870	9600	9470	9520	10900	10700	10800	5300	4650	5080
18	9540	9180	9310	9690	9510	9560	10800	10500	10700	5450	4800	5200
19	9910	9540	9730	9930	9550	9720	10800	10600	10700	5640	5360	5480
20	9970	9730	9880	9910	9560	9760	11000	4970	9130	5850	5580	5700
21	10100	9950	10100	9960	9630	9750	6010	2500	3870	6050	4420	5790
22	10200	10100	10200	9880	9780	9830	6600	3230	4200	4720	1030	1860
23	10200	3540	6970	9960	9660	9810	3230	3050	3120	2730	1270	1990
24	7850	5540	6840	9900	9620	9760	3630	3130	3350	4170	2730	3460
25	8720	7740	8160	9880	9490	9690	3850	3570	3700	4960	4140	4500
26	9290	8660	8870	9960	9540	9680	3880	3790	3830	5640	4890	5270
27	9430	9170	9230	9980	9650	9800	3950	3750	3810	5810	5510	5640
28	9480	9240	9360	9700	9100	9420	4390	3950	4150	6320	5780	5990
29	9690	9370	9530	9340	9080	9210	4720	4320	4520	6730	6150	6410
30	10100	9690	9880	9110	8910	9000	4980	4650	4770	6610	6370	6470
31	10200	9840	10000	---	---	---	5150	4840	5010	6760	1330	4060
MONTH	10400	3540	9130	10500	8910	9770	11000	2500	7900	6760	1030	4480

08086290 BIG SANDY CREEK ABOVE BRECKENRIDGE, TX--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	25.8	22.8	24.4	15.3	13.5	14.5	11.3	9.9	10.5	8.2	4.5	6.1
2	26.1	23.0	24.5	14.4	12.3	13.4	10.7	10.0	10.5	12.4	8.0	10.2
3	25.8	22.8	24.3	13.2	10.2	11.8	11.8	9.3	10.4	13.6	11.3	12.3
4	25.7	23.0	24.2	13.9	10.6	12.3	9.3	5.9	7.6	14.7	12.8	13.6
5	25.6	23.0	24.3	14.6	12.4	13.5	8.7	5.4	7.0	12.9	8.8	11.9
6	24.8	23.2	24.0	13.6	10.9	12.1	7.9	6.2	7.0	10.8	8.7	9.8
7	24.0	22.5	23.3	11.9	9.2	10.5	8.0	7.1	7.6	9.0	6.3	8.0
8	25.1	22.6	23.8	12.7	10.2	11.4	10.8	7.2	8.8	7.7	5.1	6.2
9	26.0	23.8	24.5	12.8	12.2	12.5	10.8	8.7	9.6	8.3	4.6	6.2
10	25.0	23.4	24.2	12.2	7.8	9.9	9.2	6.5	7.6	6.5	5.8	6.1
11	24.5	22.9	23.4	9.2	6.0	7.4	7.1	5.5	6.1	8.6	5.9	7.0
12	23.6	21.7	23.0	9.3	8.9	9.1	5.6	4.1	4.9	10.7	7.7	9.0
13	21.7	17.7	19.4	9.9	9.1	9.4	6.0	2.4	4.1	9.9	6.6	7.6
14	18.6	14.8	16.8	9.8	7.6	9.1	5.7	2.3	4.0	9.3	6.2	7.3
15	17.8	14.1	16.1	8.0	5.5	7.0	6.2	3.4	4.8	7.6	4.5	6.2
16	17.4	14.3	16.1	7.4	4.0	5.5	6.9	4.6	5.9	10.3	5.7	7.3
17	18.2	14.8	16.6	7.5	5.1	6.2	7.0	4.2	5.9	8.8	5.1	7.0
18	18.1	14.4	16.3	8.0	4.9	6.3	7.1	4.1	6.0	11.9	7.2	8.8
19	18.7	15.7	17.3	8.5	6.0	7.6	9.2	5.8	7.3	8.7	5.6	7.4
20	19.0	16.7	17.9	10.2	7.6	9.0	9.5	6.4	8.3	10.9	7.5	8.8
21	18.5	15.4	16.7	10.4	8.7	9.6	7.7	5.7	6.5	10.0	7.7	9.2
22	15.8	13.3	14.6	10.2	7.5	9.0	7.6	5.6	6.7	8.4	5.8	6.6
23	17.9	14.5	16.1	10.2	7.3	9.1	7.0	6.2	6.7	7.5	4.2	5.7
24	18.2	14.2	16.0	11.0	8.4	9.9	7.9	4.9	6.2	8.2	3.8	5.6
25	16.7	14.7	15.8	13.5	9.7	11.6	6.3	5.0	5.8	10.2	6.0	7.7
26	15.6	11.0	12.9	13.9	12.2	13.1	6.9	4.3	5.4	11.7	6.9	8.9
27	12.8	9.3	11.2	14.3	12.0	13.2	6.1	2.9	4.5	10.1	5.8	7.9
28	13.4	10.5	12.0	15.1	12.6	14.1	6.1	3.2	4.6	12.5	7.6	9.3
29	15.2	11.7	13.4	12.6	10.4	11.3	6.5	2.8	4.5	12.1	7.4	9.7
30	17.1	14.3	15.6	11.3	8.9	10.1	8.1	3.5	5.3	11.0	7.1	9.1
31	16.3	13.4	14.7	---	---	---	7.4	3.7	5.6	12.5	10.7	11.4
MONTH	26.1	9.3	18.8	15.3	4.0	10.3	11.8	2.3	6.6	14.7	3.8	8.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.3	10.8	11.6	13.5	7.2	10.2	21.0	14.5	17.6	24.4	17.2	20.2
2	12.4	8.5	10.4	13.6	7.2	10.1	21.3	15.3	18.1	26.7	19.5	22.3
3	12.0	7.6	9.7	12.6	7.0	9.9	20.5	14.9	17.5	25.9	20.3	22.8
4	9.8	8.4	9.0	17.5	10.3	13.4	20.1	14.1	17.1	25.2	18.6	21.5
5	8.7	7.5	8.2	16.2	12.5	14.0	20.8	14.2	17.4	27.1	21.2	23.7
6	7.5	5.9	6.7	12.6	10.1	10.8	20.6	16.5	18.4	26.4	20.7	23.5
7	8.8	3.9	6.3	10.8	9.4	10.1	21.4	15.6	18.6	26.4	19.5	23.0
8	11.3	5.7	8.2	10.5	7.5	8.8	21.1	15.8	18.5	24.8	20.5	22.7
9	13.2	7.5	10.1	10.0	5.5	7.6	20.9	14.3	17.6	27.4	20.5	23.4
10	12.7	10.0	11.3	11.5	5.3	7.9	21.3	14.6	17.9	25.9	20.2	23.2
11	13.2	7.4	9.7	13.2	5.7	8.8	21.8	16.1	18.8	26.9	21.4	24.0
12	10.6	8.7	9.2	10.5	6.2	8.4	22.8	16.9	19.7	28.0	22.1	24.6
13	11.2	8.7	9.4	12.0	8.2	9.9	23.7	18.3	20.9	27.0	23.3	25.2
14	10.8	8.1	9.6	13.9	10.8	12.2	23.7	17.3	20.5	28.0	23.7	25.7
15	12.9	9.9	11.0	14.4	12.2	13.5	25.0	19.9	22.3	27.6	23.9	25.7
16	12.6	10.2	11.2	12.9	12.2	12.3	22.8	17.9	20.4	26.6	21.2	23.9
17	11.6	9.3	10.4	13.1	11.3	12.2	19.4	15.4	16.6	26.1	23.5	24.7
18	12.1	7.4	9.6	15.4	11.9	13.6	19.6	13.3	16.3	27.4	22.7	25.1
19	12.1	9.4	10.3	14.9	11.3	13.1	20.7	14.0	17.2	28.6	24.0	26.0
20	13.8	7.6	10.5	13.8	9.9	11.6	20.9	15.6	17.8	27.2	24.0	25.8
21	11.8	9.5	10.3	14.1	9.9	11.8	21.3	14.4	17.6	26.8	24.5	25.7
22	11.3	8.9	9.9	16.4	10.3	13.1	21.7	14.5	17.7	26.1	24.0	25.2
23	13.8	8.7	11.0	18.7	12.5	15.5	21.5	14.8	18.0	25.7	23.8	24.9
24	16.8	10.0	13.1	20.1	14.7	17.4	23.3	16.9	19.8	26.4	23.1	24.7
25	19.2	13.8	15.9	21.8	16.6	19.1	24.5	18.3	21.1	26.0	23.7	25.1
26	16.5	12.2	14.5	22.6	17.9	19.9	23.1	20.4	21.4	26.8	22.8	24.9
27	15.3	9.5	12.3	22.1	17.9	19.8	22.1	18.1	19.7	27.2	22.9	25.2
28	14.4	9.4	11.8	23.1	16.6	19.7	20.9	16.2	18.0	29.3	23.7	26.5
29	---	---	---	23.0	18.5	20.5	21.7	14.5	17.5	30.9	25.0	27.8
30	---	---	---	22.8	18.5	20.5	23.4	15.5	18.6	31.2	25.3	28.0
31	---	---	---	20.4	15.6	17.9	---	---	---	31.8	26.0	28.4
MONTH	19.2	3.9	10.4	23.1	5.3	13.3	25.0	13.3	18.6	31.8	17.2	24.6

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX

LOCATION.--Lat 32°49'53", long 98°58'03", Stephens County, Hydrologic Unit 12060105, on left bank just upstream from dam on Hubbard Creek, 1.4 mi upstream from U.S. Highway 183, 6.5 mi northwest of Breckenridge, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--1,085 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Oct 1962 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area. WDR TX-95-2: 1990-94.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by a rolled earthfill dam 5,630 ft long. There are two additional levees, the north and south, making an overall length of 3.5 mi. Storage began Sep 1962 and the dam was completed in Dec 1962. The emergency spillway is a 2,000-foot-wide cut through natural ground near the left end of dam. The service spillway is a partially controlled morning-glory type, with 12 lift gates designed to discharge 30,000 ft³/s with a 17.5-foot head through a 22.0-foot-diameter concrete conduit. The dam is the property of the West Central Texas Municipal Water District. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	1,208.0
Crest of emergency spillway.....	1,194.0
Top of gates.....	1,185.1
Top of conservation pool.....	1,183.0
Crest of spillway.....	1,176.6
Sill of gate.....	1,138.0
Lowest gated outlet (invert).....	1,136.0

COOPERATION.--The capacity table dated Aug 1, 1962 was furnished by the West Central Texas Municipal Water District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 441,200 acre-ft, Oct 14, 1981, for several hours (elevation, 1,190.22 ft); minimum since normal operating level was reached in May 1969, 157,400 acre-ft, Oct 1, 1984 (elevation, 1,169.89 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 320,700 acre-ft, Mar 17 (elevation, 1,183.19 ft); minimum contents, 267,600 acre-ft, Sep 30 (elevation, 1,179.51 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	296700	293500	290800	293400	296100	296300	314000	308000	301600	295100	286000	276900
2	296600	293200	291200	293400	295800	296100	314400	307700	301200	295000	285500	276700
3	296300	292900	291200	293400	295800	296100	313400	307600	300500	294700	285300	276300
4	295700	292900	291100	293200	295800	295800	313100	307400	300200	294500	285100	276000
5	295600	292500	290600	293800	296100	295700	312900	307300	299600	297600	284900	275600
6	295400	292500	290800	294200	295800	295800	312800	307200	299200	296900	284900	275200
7	295600	292400	291800	294700	295800	297100	312900	306900	300300	296700	284200	274800
8	295400	292100	291800	294400	296000	297000	312600	306400	301200	296400	284100	274300
9	295100	291600	291200	294200	296100	296900	312400	306100	301400	296000	283500	273900
10	296000	291600	290800	294200	295700	296600	312300	305900	301800	295800	283200	273500
11	297100	291300	290800	294500	295700	296700	312600	305800	302200	295400	283100	272700
12	297000	291600	290800	294200	296000	296700	312700	305500	301900	295300	282900	272600
13	296300	291900	290800	294700	296100	296800	311600	305400	301500	294800	282800	272400
14	296100	291600	290600	294200	296000	296700	311500	305200	301400	294500	282700	272200
15	295800	291600	290500	294400	295800	298200	311300	304800	300900	294200	282700	272000
16	295700	291300	290500	294000	296400	317800	310800	304800	300800	293800	282200	271800
17	295300	291300	290500	294200	296600	318100	310800	304400	300600	293500	281700	271800
18	295400	291200	290500	294000	296600	315800	310600	304000	300500	293100	281400	271400
19	295100	291200	290000	294000	296400	314500	310500	303800	299800	292500	281400	271200
20	294700	291100	292200	294000	296700	314200	310100	303700	299800	292200	281000	270800
21	294400	291100	292700	294700	297100	314400	309800	303700	299600	291600	280700	270600
22	294500	290900	292500	294800	297000	314500	309700	303400	299300	291200	280300	270000
23	295800	290800	293200	294800	297000	314400	309400	303300	298600	290800	279800	269900
24	295600	290600	293200	295000	297000	314800	309400	303000	298200	290300	279800	269700
25	295600	291100	293200	294800	297000	314800	309400	302800	297900	289700	279300	269200
26	294500	290600	293700	294800	297000	315100	309400	302700	297400	289200	279000	268700
27	294700	290800	293700	294700	296600	314700	309100	302700	296600	288600	278700	268400
28	294100	291300	293400	294500	296400	315700	309000	302500	296400	288200	278100	268400
29	294200	290900	293200	294500	---	315200	308500	302200	296100	287700	278100	268100
30	294000	290800	293100	294400	---	315500	308400	302100	295600	286900	277600	267600
31	293800	---	293200	296000	---	314400	---	301900	---	286600	277200	---
MAX	297100	293500	293700	296000	297100	318100	314400	308000	302200	297600	286000	276900
MIN	293800	290600	290000	293200	295700	295700	308400	301900	295600	286600	277200	267600
(+)	1181.38	1181.17	1181.34	1181.53	1181.56	1182.77	1182.37	1181.94	1181.50	1180.88	1180.21	1179.51
(@)	-3100	-3000	+2400	+2800	+400	+18000	-6000	-6500	-6300	-9000	-9400	-9600
CAL YR 1997	MAX 331100	MIN 290000	(@) -22200									
WTR YR 1998	MAX 318100	MIN 267600	(@) -29300									

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Sep 1963 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

324932098575101 - HUBBARD CREEK RESERVOIR SITE P01

DATE	TIME	RESER- VOIR STORAGE (AC-FT) (00054)	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL AS (MG/L) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
MAR											
18...	1337	317000	1.00	1010	8.2	11.0	1.60	10.4	95	240	130
18...	1339	--	10.0	1010	8.2	11.0	--	10.4	95	--	--
18...	1341	--	20.0	1000	8.2	11.0	--	10.4	95	--	--
18...	1343	--	30.0	1000	8.2	11.0	--	10.2	93	--	--
18...	1345	--	40.0	1000	8.1	10.5	--	10.1	91	--	--
18...	1347	--	50.0	1000	8.1	10.5	--	9.9	89	--	--
18...	1349	--	60.0	1010	8.0	10.5	--	9.8	88	--	--
18...	1351	--	66.0	1010	8.0	10.5	--	9.7	87	250	130
JUL											
01...	0920	296000	1.00	988	8.4	29.5	2.07	7.5	103	250	140
01...	0924	--	10.0	988	8.4	29.5	--	7.5	103	--	--
01...	0927	--	20.0	995	8.3	28.5	--	7.0	95	--	--
01...	0931	--	30.0	1010	8.2	28.0	--	6.4	86	--	--
01...	0934	--	40.0	1010	8.0	27.5	--	5.0	66	--	--
01...	0938	--	50.0	1010	7.4	26.5	--	1.8	23	--	--
01...	0942	--	65.0	1010	7.3	22.0	--	.2	2	250	120

324932098575101 - HUBBARD CREEK RESERVOIR SITE P01

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
MAR										
18...	65	20	97	3	6.8	120	67	200	.28	6.4
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	65	20	98	3	6.7	120	67	210	.28	6.5
JUL										
01...	67	21	101	3	7.1	120	68	210	.27	6.1
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	69	20	97	3	6.7	130	60	200	.32	8.8

324932098575101 - HUBBARD CREEK RESERVOIR SITE P01

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR										
18...	538	<.010	<.050	<.020	--	.27	<.010	<.010	<10	<4.0
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	539	<.010	<.050	.031	.24	.27	<.010	<.010	<10	77
JUL										
01...	549	<.010	<.050	.037	.20	.23	<.010	<.010	<10	<4.0
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	<.010	<.050	.056	.21	.26	<.010	<.010	<10	<4.0
01...	--	<.010	.094	.050	.25	.29	<.010	<.010	<10	51
01...	541	<.010	<.050	.320	.32	.64	<.010	<.010	140	1890

BRAZOS RIVER BASIN

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

324649099000501 - HUBBARD CR RES SITE P09

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
MAR											
18...	1307	1.00	996	8.1	11.0	.70	10.2	93	240	120	64
18...	1309	10.0	996	8.1	11.0	--	10.2	93	--	--	--
18...	1311	20.0	1000	8.1	10.5	--	10.2	92	--	--	--
18...	1313	30.0	1010	8.1	10.5	--	10.1	91	--	--	--
18...	1315	40.0	1010	8.1	10.5	--	10.1	91	--	--	--
18...	1317	46.0	1000	8.0	10.5	--	10.1	91	240	130	65
JUL											
01...	0841	1.00	1010	8.3	28.0	1.25	6.9	93	250	130	67
01...	0844	10.0	1000	8.3	28.0	--	6.8	91	--	--	--
01...	0847	20.0	1020	8.3	28.0	--	6.8	91	--	--	--
01...	0850	30.0	1020	8.0	27.5	--	5.5	73	--	--	--
01...	0853	40.0	1020	7.7	27.0	--	4.3	57	--	--	--
01...	0857	46.0	1020	7.6	27.0	--	3.0	40	260	140	70

324649099000501 - HUBBARD CR RES SITE P09

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS (70301)
MAR										
18...	19	95	3	6.5	120	66	200	.27	6.3	528
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	20	97	3	6.7	120	67	200	.26	6.1	532
JUL										
01...	20	99	3	7.0	120	68	210	.33	6.2	550
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	21	100	3	6.2	120	67	210	.27	7.0	552

324649099000501 - HUBBARD CR RES SITE P09

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR										
18...	--	<.010	<.050	<.020	--	.27	<.010	<.010	<10	<4.0
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	--	<.010	<.050	.020	.25	.27	<.010	<.010	<10	4.4
JUL										
01...	--	<.010	<.050	.062	3.5	3.6	.333	<.010	<10	<4.0
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--
01...	.032	.020	.052	.104	.33	.44	<.010	<.010	<10	163

BRAZOS RIVER BASIN

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

324606099000201 - HUBBARD CR RES SITE P10

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00301)
MAR							
18...	1247	1.00	842	7.9	12.0	9.1	85
18...	1249	10.0	850	7.9	12.0	9.1	85
18...	1251	20.0	879	7.9	12.0	9.1	85
18...	1253	30.0	1020	8.0	11.0	10.1	92
18...	1255	36.0	1020	8.0	11.0	10.0	91
JUL							
01...	1139	1.00	1060	8.3	28.5	7.2	97
01...	1141	10.0	1070	8.3	28.0	6.9	93
01...	1143	20.0	1070	8.1	28.0	6.3	85
01...	1146	30.0	1070	7.8	27.0	4.2	55
01...	1148	36.0	1070	7.8	27.0	4.1	54

324514099010201 - HUBBARD CR RES SITE P11

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00301)
MAR							
18...	1227	1.00	737	7.8	12.5	8.4	79
18...	1229	10.0	780	7.8	12.5	8.8	83
18...	1231	20.0	928	7.9	11.5	9.3	86
18...	1233	27.0	1000	7.9	11.5	9.7	89
JUL							
01...	1157	1.00	1060	8.2	28.5	7.1	96
01...	1159	10.0	1060	8.2	28.0	6.7	90
01...	1201	20.0	1060	7.8	27.5	4.3	57
01...	1204	25.0	1060	7.6	27.5	2.7	36

324301099001701 - HUBBARD CR RES SITE P12

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00301)	HARD-NESS TOTAL AS CACO3 (MG/L) (00900)	HARD-NESS NONCARB FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L) AS CA (00915)
MAR											
18...	1202	1.00	304	7.6	13.5	.10	7.6	73	89	28	27
18...	1204	10.0	542	7.5	13.0	--	7.3	70	--	--	--
18...	1206	15.0	646	7.4	12.5	--	7.0	66	150	76	45
JUL											
01...	1220	1.00	1160	8.2	29.0	.34	6.7	92	270	150	74
01...	1225	13.0	1070	7.8	28.0	--	3.9	52	260	140	70

324301099001701 - HUBBARD CR RES SITE P12

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
MAR											
18...	4.9	22	1	4.6	61	19	44	.12	8.0	168	.195
18...	--	--	--	--	--	--	--	--	--	--	--
18...	9.4	62	2	4.8	74	39	120	.15	6.5	330	--
JUL											
01...	21	113	3	6.9	120	68	240	.36	6.5	601	--
01...	21	103	3	7.2	120	68	210	.27	6.8	559	--

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

324301099001701 - HUBBARD CR RES SITE P12

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS P04) (00660)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR 18...	.010	.205	<.020	--	.44	.029	.034	.10	26	<4.0
MAR 18...	--	--	--	--	--	--	--	--	--	--
MAR 18...	<.010	.132	.034	.37	.40	<.010	.014	.04	22	5.3
JUL 01...	<.010	<.050	.038	.24	.28	<.010	<.010	--	<10	<4.0
JUL 01...	<.010	<.050	.057	.31	.36	.017	<.010	--	<10	15

324949098594301 - HUBBARD CR RES SITE P13

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
MAR 18...	1402	1.00	1000	8.2	11.0	10.4	95
MAR 18...	1404	10.0	1000	8.2	11.0	10.2	93
MAR 18...	1406	20.0	1000	8.1	11.0	10.1	92
MAR 18...	1408	30.0	1000	8.1	11.0	10.1	92
MAR 18...	1410	40.0	1000	8.1	11.0	10.0	91
MAR 18...	1412	50.0	1010	8.0	10.5	9.9	89
MAR 18...	1414	61.0	1010	8.0	10.5	9.9	89
JUL 01...	1008	1.00	1010	8.3	29.5	7.2	99
JUL 01...	1010	10.0	1020	8.3	29.5	7.2	99
JUL 01...	1012	20.0	1030	8.3	28.5	7.1	96
JUL 01...	1015	30.0	1040	8.1	28.0	5.8	78
JUL 01...	1017	40.0	1040	7.8	27.0	4.5	59
JUL 01...	1019	50.0	1030	7.4	26.0	2.8	36
JUL 01...	1021	58.0	1030	7.4	23.5	2.0	25

324802099021601 - HUBBARD CR RES SITE P15

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
MAR 18...	1452	1.00	965	8.1	11.5	9.8	90
MAR 18...	1454	10.0	978	8.1	11.5	9.7	89
MAR 18...	1456	20.0	994	8.0	11.0	9.6	88
MAR 18...	1458	30.0	1010	8.0	11.0	9.7	88
MAR 18...	1500	38.0	1020	8.0	11.0	9.9	90
JUL 01...	1040	1.00	1040	8.3	29.0	7.3	100
JUL 01...	1042	10.0	1040	8.3	29.0	7.2	98
JUL 01...	1045	20.0	1050	8.2	28.5	6.9	93
JUL 01...	1048	30.0	1060	7.7	27.5	3.5	47
JUL 01...	1050	36.0	1060	7.8	27.5	3.5	47

324653099032401 - HUBBARD CR RES SITE P16

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)
MAR 18...	1522	1.00	872	8.0	12.5	.20	9.2	87	220	110	57
MAR 18...	1524	10.0	950	8.0	12.0	--	9.3	87	--	--	--
MAR 18...	1526	23.0	985	8.0	11.5	--	9.5	88	240	130	64
JUL 01...	1105	1.00	1070	8.3	28.5	.73	7.0	95	260	140	69
JUL 01...	1109	10.0	1070	8.2	28.5	--	6.6	89	--	--	--
JUL 01...	1114	22.0	1070	8.1	28.0	--	5.9	79	260	140	69

BRAZOS RIVER BASIN

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

324653099032401 - HUBBARD CR RES SITE P16

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L AS SIO2) (70301)
MAR										
18...	18	84	3	6.1	110	64	170	.23	6.9	466
18...	--	--	--	--	--	--	--	--	--	--
18...	20	96	3	6.1	120	70	200	.25	6.0	536
JUL										
01...	21	102	3	7.0	120	68	210	.27	6.5	556
01...	--	--	--	--	--	--	--	--	--	--
01...	21	101	3	7.2	120	69	210	.27	6.6	553

324653099032401 - HUBBARD CR RES SITE P16

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR										
18...	<.010	.123	<.020	--	.37	<.010	.012	.04	<10	<4.0
18...	--	--	--	--	--	--	--	--	--	--
18...	<.010	.069	.022	.28	.30	<.010	<.010	--	<10	<4.0
JUL										
01...	<.010	<.050	.074	.18	.25	<.010	<.010	--	<10	<4.0
01...	--	--	--	--	--	--	--	--	--	--
01...	<.010	<.050	.053	.24	.29	<.010	<.010	--	<10	<4.0

324608099042101 - HUBBARD CR RES SITE P17

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)
MAR										
18...	1632	1.00	390	7.6	15.0	7.2	72			
18...	1634	10.0	387	7.6	15.0	7.3	73			
18...	1636	20.0	387	7.6	14.5	7.4	73			
18...	1638	28.0	385	7.6	14.5	7.5	74			
JUL										
01...	1309	1.00	1170	8.1	29.0	7.7	105			
01...	1311	10.0	1090	7.6	28.0	3.7	50			
01...	1313	19.0	1100	7.4	27.5	1.8	24			

324541099053601 - HUBBARD CR RES SITE P18

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
MAR												
18...	1702	1.00	393	7.6	15.0	.10	7.1	71	110	30	34	
18...	1704	10.0	393	7.6	15.0	--	7.2	72	--	--	--	
18...	1706	20.0	394	7.6	14.5	--	7.2	71	--	--	--	
18...	1708	25.0	395	7.6	14.5	--	7.3	72	120	33	34	
JUL												
01...	1330	1.00	1480	8.1	29.5	.61	6.5	90	340	200	85	
01...	1335	10.0	1250	7.3	27.5	--	.0	0	--	--	--	
01...	1340	20.0	1500	7.3	27.0	--	.2	3	330	180	83	

08086400 HUBBARD CREEK RESERVOIR NEAR BRECKENRIDGE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

324541099053601 - HUBBARD CR RES SITE P18

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
MAR											
18...	7.2	28	1	5.3	84	25	53	.16	10	215	.279
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	7.5	29	1	5.3	84	25	55	.15	11	219	.286
JUL											
01...	30	154	4	6.7	140	110	310	.28	7.8	788	--
01...	--	--	--	--	--	--	--	--	--	--	--
01...	30	153	4	6.6	150	110	310	.28	8.9	790	--

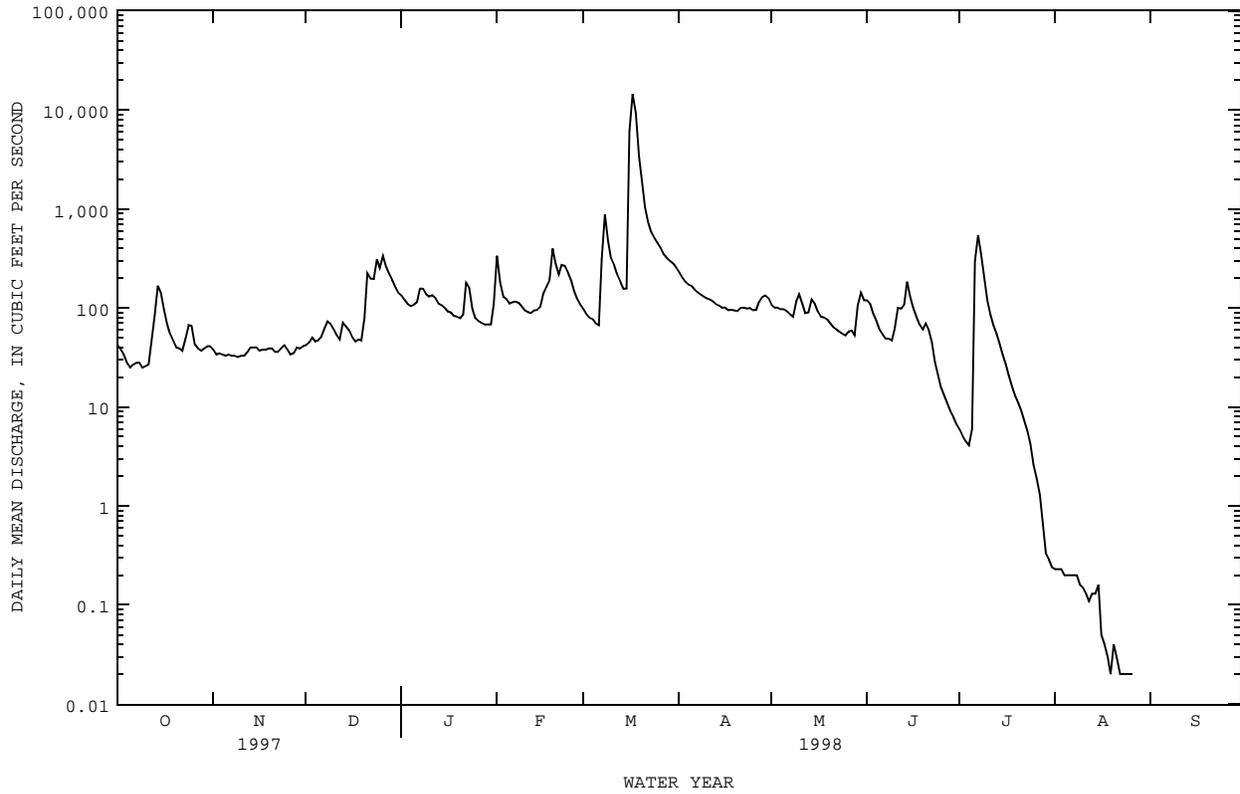
324541099053601 - HUBBARD CR RES SITE P18

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR										
18...	.011	.290	.021	.52	.54	.028	.031	.10	30	11
18...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
18...	.011	.297	.029	.53	.56	.029	.026	.08	27	8.4
JUL										
01...	<.010	<.050	.039	.26	.30	<.010	<.010	--	<10	12
01...	<.010	<.050	.072	.24	.31	<.010	<.010	--	110	821
01...	<.010	<.050	.239	.31	.55	<.010	.014	.04	550	1130

08088000 BRAZOS RIVER NEAR SOUTH BEND, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998z	
ANNUAL TOTAL	308485		68874.22		725	
ANNUAL MEAN	845		189		2966	
HIGHEST ANNUAL MEAN					189	
LOWEST ANNUAL MEAN					2966	
HIGHEST DAILY MEAN	16600	Feb 22	14500	Mar 17	74700	Aug 6 1978
LOWEST DAILY MEAN	25	Oct 5	.00	Aug 27	.00	Aug 3 1964
ANNUAL SEVEN-DAY MINIMUM	27	Oct 5	.00	Aug 27	.00	Aug 3 1964
INSTANTANEOUS PEAK FLOW			15100	Mar 17	87400	May 4 1941
INSTANTANEOUS PEAK STAGE			20.73	Mar 17	41.50	Aug 6 1978
ANNUAL RUNOFF (AC-FT)	611900		136600		525300	
10 PERCENT EXCEEDS	1820		223		1310	
50 PERCENT EXCEEDS	207		67		133	
90 PERCENT EXCEEDS	37		.02		18	

e Estimated
z Period of regulated streamflow.



BRAZOS RIVER BASIN

08088400 LAKE GRAHAM NEAR GRAHAM, TX

LOCATION.--Lat 33°08'04", long 98°36'48", Young County, Hydrologic Unit 12060201, near left end of earthen dam on Salt Creek, 2.2 mi northwest of Graham, 5 mi downstream from Briar Creek, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--221 mi².

PERIOD OF RECORD.--Mar 1958 to Sep 1963 (unpublished record), Oct 1963 to current year. Prior to Oct 1965, end of month contents only.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.30 ft above sea level. Prior to Oct 1963, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by a rolled earthfill dam 5,000 ft long. Lake Graham was connected with Lake Eddleman in 1959 by a cut channel at a gage height of 1,050.0 ft. Deliberate impoundment began Apr 28, 1958, and dam was completed in Jul 1958. The uncontrolled emergency spillway is a 1,050-foot-wide cut at the right end of dam. The spillway is designed to discharge 136,500 ft³/s at a gage height of 1,087.5 ft. The dam is the property of the city of Graham and was built to impound water for municipal and industrial uses. In addition, water is used by the Texas Electric Service Co. for operation of their steam generating powerplant. The capacity table is based on an original survey of Lake Eddleman in 1928 and a Salt Creek survey of 1953. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Gage height (feet)
Top of dam.....	1,092.0
Crest of spillway.....	1,075.0
Bottom of interconnecting channel.....	1,050.0
Lowest gated outlet (invert).....	1,050.0

COOPERATION.--Capacity table was provided by Freese and Nichols Inc., Consulting Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 63,280 acre-ft, May 3, 1990 (gage height, 1,078.52 ft); minimum, 23,390 acre-ft May 1, 1980 (gage height, 1,061.23 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 53,120 acre-ft, Mar 19 (gage height, 1,074.78 ft); minimum contents, 40,450 acre-ft, Sep 30 (gage height, 1,069.55 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46370	46850	44420	e45140	45210	45000	52870	51520	49900	47440	44560	42560
2	46320	46980	44540	e45040	45210	44970	52790	51520	49780	47340	44470	42490
3	46220	46830	44520	e45000	45190	44900	52740	51420	49680	47220	44400	42390
4	46170	46980	44490	e44970	45190	44920	52690	51370	49650	47150	44250	42300
5	46120	46850	44440	e44970	45190	44920	52640	51340	49500	47320	44200	42230
6	46050	46850	44400	e44920	45240	44900	52660	51270	49400	47320	44130	42140
7	46030	e46630	44540	e44950	45190	45480	52610	51220	49330	47220	44040	42070
8	45980	e46420	44520	e45020	45120	45670	52540	e51420	49280	47150	43960	41990
9	45960	e46220	44420	45020	45120	45720	52490	e51390	49210	47070	43870	41850
10	45930	e45980	44420	45000	45040	45720	52440	e51340	49160	46930	43750	41760
11	45930	e45760	44370	45020	45090	45720	52330	e51340	49350	46830	43700	41640
12	45930	e44710	44370	44900	45140	45640	52260	e51220	49330	46710	43660	41480
13	45930	44760	44350	44950	45140	45620	52260	e51120	49260	46660	43620	41530
14	45860	44590	44320	44850	45120	45640	52230	e51070	49180	46590	43800	41480
15	45810	44640	44300	44900	45120	45980	52180	50940	49110	46510	43730	41410
16	45760	44610	44280	44880	45160	50590	52160	50870	48980	46390	43660	41390
17	45720	44560	44250	44850	45240	52890	52110	50820	48910	46290	43590	41360
18	45640	44540	44230	44900	45260	53070	52050	50740	48830	46200	43560	41340
19	45600	44520	44250	44850	45260	53100	51980	50690	48730	46080	43490	41270
20	45570	44520	44660	44850	45140	53100	52030	50620	48610	45980	43420	41200
21	45500	44490	44780	44920	e45120	53070	51950	50570	48490	45860	43350	41090
22	45450	44470	44800	45020	e45090	53050	51930	50500	48390	45740	43280	e41090
23	45600	44440	44970	45000	e45120	53050	51850	50470	48290	45620	43240	e41000
24	45550	44440	44970	44970	e45140	53050	51780	50400	48170	45520	43140	e40930
25	46340	44440	e45000	44970	e45140	53020	51720	50350	48000	45400	43070	e40840
26	47240	44420	e45020	44970	45090	52920	51830	50300	47900	45260	43000	e40770
27	47420	44400	e45040	44920	45070	52970	51800	50300	47810	45160	42910	e40700
28	47100	44520	e45070	44920	45020	52940	51720	50250	47680	45020	42860	e40610
29	46850	44420	e45090	44880	---	52840	51650	50170	47610	44900	42790	e40510
30	46880	44440	e45090	44880	---	52920	51600	50050	47510	44780	42720	e40450
31	47270	---	e45120	45140	---	52920	---	50000	---	44660	42650	---
MAX	47420	46980	45120	45140	45260	53100	52870	51520	49900	47440	44560	42560
MIN	45450	44400	44230	44850	45020	44900	51600	50000	47510	44660	42650	40450
(+)	1072.43	1071.26	1071.54	1071.55	1071.50	1074.70	1074.18	1073.54	1072.53	1071.35	1070.50	1069.55
(@)	+880	-2830	+680	+20	-120	+7900	-1320	-1600	-2490	-2850	-2010	-2200
CAL YR 1997	MAX 56530	MIN 44230	(@) -8850									
WTR YR 1998	MAX 53100	MIN 40450	(@) -5940									

(+) Gage height, in feet, at end of month.
(@) Change in contents, in acre-feet.

e Estimated

08088500 POSSUM KINGDOM LAKE NEAR GRAFORD, TX

LOCATION.--Lat 32°52'20", long 98°25'32", Palo Pinto County, Hydrologic Unit 12060201, at Morris Sheppard Dam on the Brazos River, 2.6 mi upstream from Loving Creek, 11.3 mi southwest of Graford, and at mile 687.5.

DRAINAGE AREA.--23,596 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Mar 1941 to current year. Prior to Oct 1977, published as Possum Kingdom Reservoir.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 0.10 ft above sea level. Prior to Mar 19, 1968, mercury U-tube in powerhouse at present site and datum. Satellite telemeter at station.

REMARKS.--The lake is formed by reinforced concrete dam, Ambursen-type, massive buttress with flat-slab deck, a controlled spillway, two bulkhead sections, and an earthen-dike section. Total length of dam is 2,740 ft long. The dam was completed and storage begun Mar 21, 1941. The spillway has nine roof-weir gates (modified bear-trap type) that are 73.66 by 13 ft each and are designed to discharge about 100,000 ft³/s at a gage height of 1,000.0 ft. The outlet works consist of one controlled 54-inch diameter conduit. Water is used for power development, irrigation, municipal, industrial, and recreational purposes. Two generators located in the powerhouse at dam can produce 22,500 kilowatts at a 1,000-foot gage height. Eleven major reservoirs, with a combined capacity of 607,800 acre-ft, largely regulate the inflow. For statement regarding regulation by Natural Resources Conservation Service floodwater-retarding structures, see station 08080950. Data regarding the dam are given in the following table:

	Gage height (feet)
Top of dam.....	1,024.0
Design flood (top of gates).....	1,000.0
Crest of spillway.....	987.0
Invert of penstock.....	911.5
Lowest gated outlet (invert of 54-inch conduit).....	874.8

COOPERATION.--Capacity table 3-C was provided by the Brazos River Authority. Capacity table 4-C, provided by the Texas Water Development Board, was put into use Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 743,700 acre-ft, Oct 5, 1941 (gage height, 1,001.0 ft); maximum gage height, 1,003.60 ft Oct 13, 1981; minimum contents observed, 273,000 acre-ft, Feb 19 to Mar 17, 1953 (gage height, 967.0 ft), using capacity table 3-C.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 541,700 acre-ft, Mar 31 (gage height, 999.16 ft); minimum contents, 393,600 acre-ft, Sep 30 (gage height, 989.33 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	478100	460800	454000	454900	457700	462600	540500	520700	489200	456700	429300	410300
2	476800	460200	455100	455200	457900	461900	540300	519200	488100	455500	427900	410100
3	476400	460000	454200	455800	458200	461700	540300	516900	487800	455100	426400	408300
4	475900	459700	454200	456400	458800	462000	540000	514700	487800	454800	426100	406800
5	475400	459400	453900	456700	459300	462000	539600	514400	487000	454200	425700	405600
6	475100	458600	453900	457300	458200	460200	539800	511400	486200	452800	425200	405300
7	475300	458500	453300	457300	458500	462000	539100	509700	486000	451400	425000	405000
8	473400	458300	453600	457400	458800	460800	538600	509900	485700	450800	424600	404700
9	473400	458300	453300	457900	459100	462000	538800	511200	484100	450300	423500	404100
10	473400	457700	453400	457700	459100	462500	538300	510200	484000	449400	422200	403600
11	471700	456400	452800	457100	458500	463200	537600	508400	485700	447400	422200	403200
12	472800	456800	452300	457600	459600	463200	536900	507100	484000	445400	421100	403200
13	471400	456800	451400	457400	459300	463400	535600	506600	482900	444000	421600	402700
14	470100	456700	450600	457700	458800	464300	534900	506300	481800	443800	421500	401600
15	469200	456000	450500	456800	459700	466900	535400	504600	481400	442700	421200	400600
16	468600	455700	449900	456800	460600	489500	534900	503000	480200	442400	420500	400700
17	468300	455100	450200	457000	460800	497300	534400	501900	478300	442100	418900	400500
18	467100	454300	450000	457300	460900	511600	534200	500200	477300	441700	418700	400400
19	466600	453900	450200	456800	461600	523200	532700	499900	475100	441200	418600	400100
20	465900	454300	452000	457300	461400	530300	532000	498800	473100	439900	417000	399300
21	465200	453900	452100	458300	461100	533700	531300	498300	472100	439000	416700	397800
22	464800	453900	452400	458200	462200	535400	530700	497600	470000	437800	416400	397000
23	465700	453700	454300	457300	461900	536700	529600	497800	469700	437100	416100	396300
24	465100	453900	453900	456400	461100	537600	527400	497300	468900	436700	415700	396100
25	464900	453700	454800	456400	462300	537900	527100	496300	467400	435300	414700	395800
26	462900	453700	455100	456400	462300	537900	527100	495500	465500	434700	413300	395400
27	462200	453900	455500	456400	462600	539500	525600	495400	463700	434300	411900	395200
28	462000	454800	456000	456400	462800	539800	524200	493700	461700	433700	411900	394500
29	461700	454500	456000	456500	---	539600	522700	492300	460200	432400	411100	394000
30	461700	454300	456300	456700	---	540300	521200	491600	458600	431800	411100	393600
31	461100	---	454800	457600	---	540700	---	490800	---	431000	410700	---
MAX	478100	460800	456300	458300	462800	540700	540500	520700	489200	456700	429300	410300
MIN	461100	453700	449900	454900	457700	460200	521200	490800	458600	431000	410700	393600
(+)	994.20	993.75	993.78	993.97	994.31	999.10	997.95	996.10	994.04	992.14	990.65	989.33
(@)	-18000	-6800	+500	+2800	+5200	+77900	-19500	-30400	-32200	-27600	-20300	-17100
CAL YR 1997	MAX 544600	MIN 449900	(@) -77000									
WTR YR 1998	MAX 540700	MIN 393600	(@) -85500									

(+) Gage height, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08088610 BRAZOS RIVER NEAR GRAFORD, TX

LOCATION.--Lat 32°51'29", long 98°24'41", Palo Pinto County, Hydrologic Unit 1206021, on State Highway 16, 1.25 mi downstream of Morris Sheppard Dam (formerly Possum Kingdom Dam), 1.3 mi upstream from Loving Creek, 11.3 mi southwest of Graford, and 18.8 mi upstream from gaging station Brazos River near Palo Pinto (08089000). Prior to Feb 8, 1995, at site 1.25 mi upstream.

DRAINAGE AREA.--23,596 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Oct 1989 to current year. Prior to Feb 8, 1995, published as Brazos River at Morris Sheperd Dam near Graford (station 08088600).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 800.00 ft above sea level. Prior to Feb 8, 1995 at datum 4.92 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in Oct 1989, at least 10% of contributing drainage area has been regulated by Possum Kingdom Lake (station 08088500).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	390	31	174	128	42	47	289	325	859	633	416	46
2	482	30	48	48	42	423	256	794	117	210	555	45
3	58	30	205	47	42	99	101	871	112	49	597	605
4	55	55	183	46	41	56	101	1110	114	44	42	677
5	54	89	43	48	259	56	288	218	112	43	40	332
6	56	101	43	50	241	736	102	1300	112	639	39	44
7	58	40	420	187	42	433	279	724	114	585	38	40
8	798	31	52	56	41	983	293	160	118	508	38	48
9	83	31	142	163	41	142	176	125	883	466	298	48
10	61	222	48	48	223	175	144	481	131	629	532	45
11	552	295	423	477	46	55	240	639	135	706	44	44
12	71	60	55	48	40	420	144	623	802	948	162	44
13	412	163	579	45	39	59	914	137	671	527	41	44
14	598	32	341	144	39	57	346	185	472	47	37	459
15	435	133	168	340	39	62	144	693	121	286	37	222
16	431	126	50	45	40	678	118	708	453	206	254	41
17	87	272	137	43	38	3770	123	596	689	44	464	28
18	510	131	51	43	39	4120	118	611	642	41	52	27
19	327	176	106	43	39	2140	609	153	681	38	42	27
20	338	33	56	43	252	115	547	549	726	508	530	147
21	309	33	210	138	633	114	133	111	447	194	41	507
22	37	33	52	48	91	115	396	108	778	454	36	369
23	293	34	54	543	329	116	346	108	128	44	36	164
24	173	35	51	521	392	116	829	110	121	39	37	31
25	146	36	50	328	40	117	119	282	626	353	463	26
26	522	36	184	44	37	120	476	300	640	41	621	26
27	71	37	52	44	37	117	566	298	754	40	308	25
28	80	40	265	44	37	105	566	737	824	40	39	349
29	29	152	56	42	---	103	689	635	462	331	174	30
30	147	51	49	42	---	105	656	110	820	41	39	61
31	200	---	896	44	---	105	---	470	---	224	42	---
TOTAL	7863	2568	5243	3930	3221	15859	10108	14271	13664	8958	6094	4601
MEAN	254	85.6	169	127	115	512	337	460	455	289	197	153
MAX	798	295	896	543	633	4120	914	1300	883	948	621	677
MIN	29	30	43	42	37	47	101	108	112	38	36	25
AC-FT	15600	5090	10400	7800	6390	31460	20050	28310	27100	17770	12090	9130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999		
MEAN	450	305	1085	436	1437	1155	1340	1825	2597	521	594	737
MAX	1819	656	7172	2197	8659	4948	7952	8503	8024	1201	1228	1751
(WY)	1992	1992	1992	1992	1992	1992	1990	1990	1992	1992	1995	1996
MIN	142	85.6	78.9	93.5	58.6	79.2	89.6	62.9	69.9	40.6	53.0	153
(WY)	1993	1998	1994	1994	1994	1994	1996	1996	1996	1996	1996	1998

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1990 - 1998

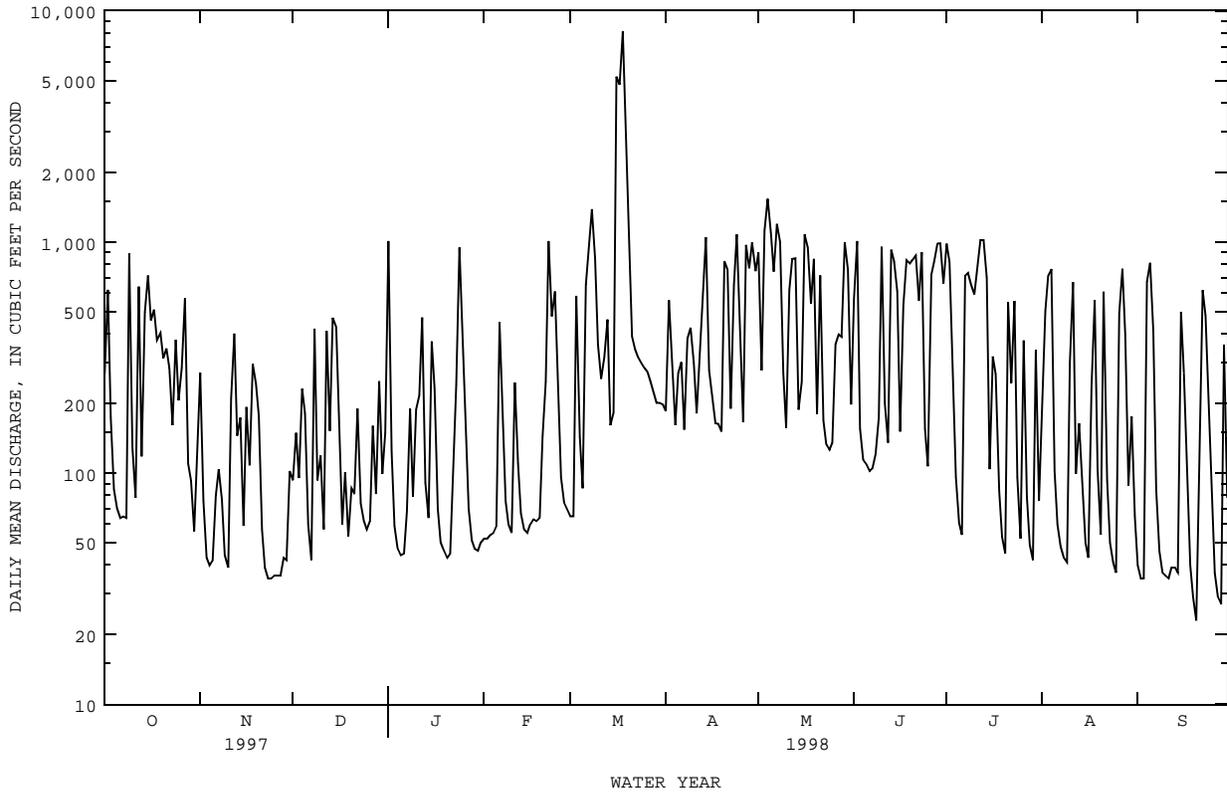
ANNUAL TOTAL	332874	96380	
ANNUAL MEAN	912	264	1035
HIGHEST ANNUAL MEAN			3170
LOWEST ANNUAL MEAN			264
HIGHEST DAILY MEAN	16300	Feb 21	43800
LOWEST DAILY MEAN	29	Oct 29	14
ANNUAL SEVEN-DAY MINIMUM	34	Nov 20	17
INSTANTANEOUS PEAK FLOW			6480
INSTANTANEOUS PEAK STAGE			75.89
ANNUAL RUNOFF (AC-FT)	660300	191200	749800
10 PERCENT EXCEEDS	1940	639	1600
50 PERCENT EXCEEDS	412	121	296
90 PERCENT EXCEEDS	55	39	40

BRAZOS RIVER BASIN

08089000 BRAZOS RIVER NEAR PALO PINTO, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998z	
ANNUAL TOTAL	437382		134029		949	
ANNUAL MEAN	1198		367		4145	
HIGHEST ANNUAL MEAN					1957	
LOWEST ANNUAL MEAN					98.5	
HIGHEST DAILY MEAN	25000	Feb 21	8170	Mar 18	81700	Apr 29 1957
LOWEST DAILY MEAN	35	Nov 23	23	Sep 20	3.4	Apr 15 1949
ANNUAL SEVEN-DAY MINIMUM	37	Nov 22	37	Nov 22	5.6	Nov 2 1940
INSTANTANEOUS PEAK FLOW			10800	Mar 18	85400	Apr 29 1957
INSTANTANEOUS PEAK STAGE			10.66	Mar 18	28.87	Apr 29 1957
ANNUAL RUNOFF (AC-FT)	867500		265800		687500	
10 PERCENT EXCEEDS	2710		846		1690	
50 PERCENT EXCEEDS	541		181		223	
90 PERCENT EXCEEDS	77		44		30	

e Estimated
z Period of regulated streamflow.



08090800 BRAZOS RIVER NEAR DENNIS, TX

LOCATION.--Lat 32°36'56", long 97°55'32", Parker County, Hydrologic Unit 12060201, on right bank at downstream side of highway embankment of bridge on Farm Road 1189, 0.2 mi south of Dennis, 1.0 mi upstream from Patrick Creek, and at mile 589.8.

DRAINAGE AREA.--25,237 mi², of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1968 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 697.67 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in May 1968, at least 10% of contributing drainage area has been regulated by Possum Kingdom Lake (station 08088500) 96 mi upstream on the Brazos River, and by Lake Palo Pinto (44,090 acre-ft) upstream on Palo Pinto Creek. Flow may be affected at times by discharge from the flood-detention pools of twelve floodwater-retarding structures with a combined detention capacity of 13,840 acre-ft. These structures control runoff from a 53.0 mi² area in the East Keechi and Pollard Creeks drainage basins. There are many diversions above station for irrigation, municipal supply and oil field operations.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1930, 31.8 ft in May 1957, from floodmark, from information by Texas Department of Transportation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	462	132	70	170	125	184	337	743	405	484	53	135
2	359	116	78	191	117	150	295	627	192	611	120	124
3	234	107	92	549	106	131	262	642	477	579	101	109
4	262	182	133	318	95	119	410	499	459	475	229	83
5	421	135	145	261	92	220	397	875	202	241	533	65
6	225	103	145	204	91	269	258	1170	130	183	576	195
7	160	83	196	210	90	202	214	595	105	112	450	555
8	134	74	206	220	92	641	318	975	102	75	218	343
9	124	68	148	199	269	1810	233	1400	102	274	130	219
10	106	75	145	152	192	1690	245	970	104	427	95	135
11	428	109	219	187	137	765	361	506	235	400	66	97
12	284	109	147	164	109	520	296	255	553	451	73	80
13	195	102	123	181	99	428	259	482	236	602	328	76
14	357	182	155	349	140	334	220	575	198	826	250	70
15	242	256	208	230	157	547	588	519	501	569	159	54
16	277	159	266	161	126	9380	680	231	451	458	129	51
17	488	137	327	128	120	18900	359	209	356	184	121	63
18	392	125	283	291	120	8950	235	710	184	210	85	101
19	394	129	179	199	111	9780	207	591	290	164	65	228
20	286	149	148	144	104	4560	180	422	511	97	231	193
21	357	196	250	117	116	2900	178	479	515	75	227	126
22	311	213	268	94	988	1360	547	228	568	77	138	81
23	307	167	196	132	902	989	542	375	439	167	224	54
24	428	119	216	127	821	815	267	203	467	73	230	53
25	312	92	257	148	540	697	366	137	462	70	132	304
26	247	78	188	619	578	601	818	119	201	71	88	285
27	280	70	161	429	397	534	422	156	127	73	70	193
28	185	76	132	315	247	471	246	252	387	89	79	148
29	419	75	113	193	---	413	588	258	583	149	519	91
30	270	73	120	139	---	367	602	347	681	94	342	69
31	172	---	127	124	---	371	---	616	---	67	237	---
TOTAL	9118	3691	5441	6945	7081	69098	10930	16166	10223	8427	6298	4380
MEAN	294	123	176	224	253	2229	364	521	341	272	203	146
MAX	488	256	327	619	988	18900	818	1400	681	826	576	555
MIN	106	68	70	94	90	119	178	119	102	67	53	51
AC-FT	18090	7320	10790	13780	14050	137100	21680	32070	20280	16710	12490	8690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1998, BY WATER YEAR (WY)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
MEAN	1606	743	826	493	997	1082	1134	2022	2186	706	863	814					
MAX	17690	5000	12240	2835	9530	5970	13320	12090	13490	4376	7600	3680					
(WY)	1982	1975	1992	1992	1992	1992	1990	1990	1982	1982	1978	1996					
MIN	69.6	78.9	73.0	78.8	33.9	26.7	27.1	30.4	61.7	37.0	56.6	14.9					
(WY)	1983	1980	1969	1969	1971	1971	1971	1988	1971	1978	1988	1984					

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1968 - 1998	
ANNUAL TOTAL	700028		157798			
ANNUAL MEAN	1918		432		1123	
HIGHEST ANNUAL MEAN					4141	
LOWEST ANNUAL MEAN					120	
HIGHEST DAILY MEAN	54500	Feb 21	18900	Mar 17	87700	Oct 14 1981
LOWEST DAILY MEAN	68	Nov 9	51	Sep 16	1.2	Aug 2 1978
ANNUAL SEVEN-DAY MINIMUM	74	Nov 26	70	Sep 11	3.0	Jul 29 1978
INSTANTANEOUS PEAK FLOW			21600		Mar 17	96600
INSTANTANEOUS PEAK STAGE			17.91		Mar 17	31.85
ANNUAL RUNOFF (AC-FT)	1389000		313000		813600	
10 PERCENT EXCEEDS	3910		597		2150	
50 PERCENT EXCEEDS	651		213		291	
90 PERCENT EXCEEDS	136		83		50	

BRAZOS RIVER BASIN

08090900 LAKE GRANBURY NEAR GRANBURY, TX

LOCATION.--Lat 32°22'27", long 97°41'20", Hood County, Hydrologic Unit 12060201, at right end of spillway of DeCordova Bend Dam on Brazos River, 2.6 mi upstream from Fall Creek, 7.5 mi southeast of Granbury, and at mile 542.5.

DRAINAGE AREA.--25,679 mi², of which 9,566 mi² probably is noncontributing.

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Oct 1968 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.11 ft below sea level. Satellite telemeter at station.

REMARKS.--Records good. The lake is formed by an Ambursen-type concrete and earthfill dam 2,256 ft long, including a 932-foot concrete spillway. The dam was completed on Aug 30, 1969, and deliberate impoundment began Sep 15, 1969. The spillway consists of sixteen 36- by 35-foot tainter gates and two 7- by 8-foot sluice gates. Outflow through the sluice gates discharges into a bay where the outflow is then controlled by two 4- by 4.5-foot sluice gates with invert at 625.8 ft. Flow is affected at times by discharge from the flood-detention pools of 12 floodwater-retarding structures with a combined detention capacity of 13,940 acre-ft. These structures control runoff from 53.9 mi² in the East Keechi, Kickapoo, and Ruckers Creeks drainage basins. The lake was built by the Brazos River Authority for the conservation of water for irrigation, municipal, and industrial uses. Water is also diverted into Squaw Creek Reservoir. The city of Granbury returns wastewater effluent into Lake Granbury. Data regarding the dam is given in the following table:

	Gage height (feet)
Top of dam.....	706.5
Top of tainter gates (design flood).....	693.0
Crest of spillway.....	658.0
Lowest gated outlet (invert).....	640.0

COOPERATION.--The capacity table, Table No. 2-C, was provided by the Texas Water Development Board and put into use Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 158,800 acre-ft, Mar 27, 1977 (gage height, 693.60 ft); minimum contents since normal operating level was reached in Oct 1969, 97,600 acre-ft, Aug 9, 1978 (gage height, 685.28 ft), using Capacity Table 1-C.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 138,300 acre-ft, Mar 16 (gage height, 693.19 ft); minimum contents, 124,800 acre-ft, Sep 24 (gage height, 691.46 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131900	131200	131000	132700	132400	131300	131400	132800	132700	134200	128600	127700
2	131900	131100	131700	132600	131700	131200	132600	131500	132000	134000	128400	127300
3	131900	131000	131700	133200	131500	131100	132600	131300	132100	133400	127800	127200
4	132500	131000	131900	134300	131700	131200	132000	131300	133600	133300	127800	127100
5	132600	131100	131900	132700	131800	131900	132100	132000	133300	132600	128500	126500
6	133300	131000	131900	131800	131800	132600	132000	133500	132600	131800	129400	126400
7	132800	130500	133300	130400	131800	132800	131900	132900	131300	132200	129700	127000
8	132600	130500	133300	130600	132300	133400	131900	132200	130600	131900	129900	127100
9	131800	131000	133300	131600	132600	134300	131800	132000	131100	131900	129400	127100
10	131200	130400	132400	131700	132700	134300	131400	131400	131000	132000	129400	126700
11	131900	130300	131700	132600	131900	133300	131300	130900	131000	132000	129200	126700
12	133400	131000	131000	133300	131800	132600	131400	130700	131900	132000	128600	126500
13	132900	131000	130400	132700	131300	132600	132100	130800	132600	133300	129200	126000
14	132600	131200	130300	133200	130800	132600	131400	131900	132900	133700	129600	125700
15	131900	131200	130400	132600	130800	133500	131800	133100	133400	133700	129600	125600
16	131700	131600	131100	131900	131300	127300	132800	133500	133300	133400	129600	125700
17	132000	131700	131700	131700	131700	130600	132300	133600	132600	132500	129800	125700
18	132600	131900	131900	131600	131900	125700	132000	133800	131900	132000	129400	125800
19	133000	131800	131900	131600	131900	127400	131400	133500	131600	131900	129400	125900
20	133300	132600	133500	131900	131900	128200	132000	132700	131200	131900	129000	125800
21	132800	132600	133300	132400	134300	131800	131900	131900	131600	131700	128700	125700
22	132000	132900	131800	131700	135100	131300	132800	130700	131600	131200	128700	125700
23	131900	133300	130900	131700	134300	132600	132800	130800	131500	131000	128600	125100
24	131200	132700	130400	131700	131900	132900	131200	131100	131600	130900	127800	125000
25	131200	131900	131300	132300	132000	132000	131000	131200	132500	130900	127400	125100
26	130300	131700	131800	133200	132600	131200	133000	131400	132600	130800	127200	125200
27	129800	131000	131800	133400	131900	132700	133400	132900	132400	130500	126900	125500
28	130200	131000	132600	133300	131800	132900	133000	133100	132300	130200	126600	125300
29	130500	131000	132500	133300	---	132900	133000	133000	133100	130000	127100	125100
30	131100	131000	132600	132600	---	133100	133500	132700	134100	129400	127300	124900
31	131200	---	132600	132500	---	131000	---	132900	---	128900	127400	---
MAX	133400	133300	133500	134300	135100	134300	133500	133800	134100	134200	129900	127700
MIN	129800	130300	130300	130400	130800	125700	131000	130700	130600	128900	126600	124900
(+)	692.28	692.26	692.47	692.45	692.37	692.26	692.58	692.50	692.65	691.99	691.80	691.47
(@)	0	-200	+1600	-100	-700	-800	+2500	-600	+1200	-5200	-1500	-2500
CAL YR 1997	MAX 136200	MIN 128600	(@) -900									
WTR YR 1998	MAX 135100	MIN 124900	(@) -6300									

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08091000 BRAZOS RIVER NEAR GLEN ROSE, TX

LOCATION.--Lat 32°16'18", long 97°39'48", Somervell County, Hydrologic Unit 12060201, at downstream side of bridge on U.S. Highway 67, 600 ft downstream from George's Creek, 4.1 mi upstream from Paluxy River, 6 mi northeast of Glen Rose, and at mile 511.2.

DRAINAGE AREA.--25,818 mi², of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Oct 1923 to current year.

Water-quality records.--Chemical analyses: Aug to Nov 1946. Chemical and biochemical analyses: Oct 1980 to Jun 1987.

REVISED RECORDS.--WSP 1058: 1932. WSP 1512: 1946-47, 1949. WSP 1712: 1928(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 567.82 ft above sea level. Prior to May 7, 1931, nonrecording gage at site 2.5 mi downstream at same datum. May 7, 1931, to Sep 30, 1957, water-stage recorder at site 2.4 mi downstream at same datum, used as supplementary gage Oct 1, 1957 to Apr 1, 1959. Apr 27, 1950 to Sep 30, 1957, water-stage recorder, present gage, used as supplementary gage. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since 1941, at least 10% of contributing drainage area has been regulated by Possum Kingdom Lake (station 08088500) 176 mi upstream. There are many diversions above station for irrigation and municipal supplies, and for oil field operations.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--17 years (water years 1924-40) prior to regulation by Possum Kingdom Lake, 1,581 ft³/s (1,145,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1924-40)--Maximum discharge, 97,600 ft³/s May 18, 1935 (gage height, 23.68 ft, from floodmarks); no flow at times prior to construction of Morris Sheppard Dam (1941) on the Brazos River, forming Possum Kingdom Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Second highest known flood since at least 1876 occurred in May 1922 and reached a stage of 29.5 ft, and flood in May 1908 reached a stage of 27 ft, each at site 2.4 mi downstream, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	43	56	64	713	944	1330	545	529	10	8.8	12
2	22	28	50	61	675	884	267	1770	524	269	9.6	11
3	23	25	57	285	660	838	112	1750	585	757	7.2	10
4	23	25	45	651	475	405	358	636	381	787	9.7	9.3
5	23	25	37	1360	157	173	635	505	110	793	16	8.3
6	25	26	33	2550	96	145	632	498	182	799	24	7.8
7	38	26	39	2270	85	529	630	538	588	502	31	7.8
8	206	26	56	1150	84	816	628	1780	599	109	20	7.8
9	554	27	258	426	81	877	627	1830	340	45	15	7.7
10	551	27	609	188	80	2090	633	1830	107	24	13	7.8
11	407	28	579	153	360	2130	644	1730	318	16	15	10
12	137	36	574	162	654	1990	411	621	370	14	23	16
13	69	41	560	176	669	753	108	508	101	13	22	20
14	200	41	554	474	659	684	326	289	50	100	36	21
15	527	38	316	679	658	792	625	78	33	579	32	20
16	527	35	93	675	347	30800	628	40	179	584	24	22
17	385	34	49	674	133	20100	631	31	658	578	27	31
18	112	35	39	666	99	18200	632	31	674	578	31	36
19	54	36	37	657	95	8440	573	655	687	323	23	29
20	35	36	298	341	89	8250	561	1330	683	74	21	25
21	138	35	1170	136	112	2790	273	1360	690	35	27	18
22	587	35	760	216	817	2660	89	1370	701	19	533	16
23	717	35	1960	634	2280	2420	50	1290	693	12	362	15
24	1960	35	1120	334	2320	521	875	451	692	9.6	110	15
25	673	196	470	125	3010	1380	1330	97	448	8.5	81	15
26	564	554	161	92	3950	1950	462	46	119	7.8	49	15
27	551	571	102	87	2410	1100	81	84	41	7.3	31	15
28	327	569	81	360	1260	770	239	69	22	7.5	20	15
29	102	423	77	642	---	700	531	45	14	7.7	14	16
30	62	122	102	646	---	713	517	171	11	7.4	12	17
31	50	---	82	672	---	2270	---	518	---	7.2	11	---
TOTAL	9671	3213	10424	17606	23028	117114	15438	22496	11129	7083.0	1658.3	476.5
MEAN	312	107	336	568	822	3778	515	726	371	228	53.5	15.9
MAX	1960	571	1960	2550	3950	30800	1330	1830	701	799	533	36
MIN	22	25	33	61	80	145	50	31	11	7.2	7.2	7.7
AC-FT	19180	6370	20680	34920	45680	232300	30620	44620	22070	14050	3290	945

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998z, BY WATER YEAR (WY)

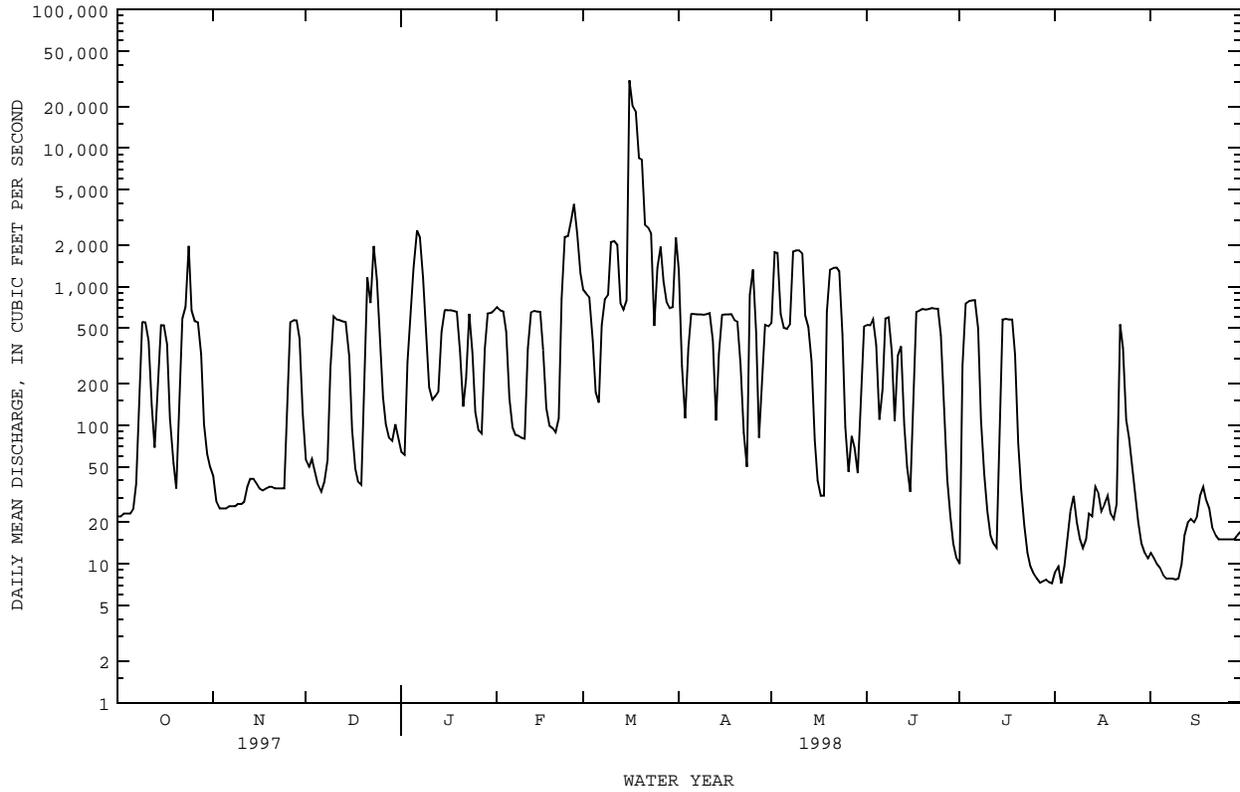
MEAN	1833	843	785	592	994	1039	1359	3345	2338	1045	815	1122
MAX	17860	6209	14960	3180	11290	6684	14360	44800	13660	4873	6621	9994
(WY)	1982	1975	1992	1968	1992	1992	1990	1957	1982	1982	1978	1966
MIN	7.42	13.7	25.1	34.4	15.9	34.3	9.99	15.7	17.5	12.1	17.2	15.9
(WY)	1953	1989	1989	1989	1984	1974	1974	1996	1996	1978	1984	1998

BRAZOS RIVER BASIN

08091000 BRAZOS RIVER NEAR GLEN ROSE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998z	
ANNUAL TOTAL	874858		239336.8		1344	
ANNUAL MEAN	2397		656		5494	
HIGHEST ANNUAL MEAN					115	
LOWEST ANNUAL MEAN					1957	
HIGHEST DAILY MEAN	57400	Feb 22	30800	Mar 16	85100	May 1 1957
LOWEST DAILY MEAN	22	Oct 1	7.2	Jul 31	.10	Oct 30 1952
ANNUAL SEVEN-DAY MINIMUM	25	Oct 1	7.6	Jul 25	.36	Oct 27 1952
INSTANTANEOUS PEAK FLOW			48200	Mar 16	89600	Dec 21 1991
INSTANTANEOUS PEAK STAGE			25.80	Mar 16	35.76	Apr 28 1990
ANNUAL RUNOFF (AC-FT)	1735000		474700		973800	
10 PERCENT EXCEEDS	5330		1270		2540	
50 PERCENT EXCEEDS	660		171		360	
90 PERCENT EXCEEDS	38		15		39	

z Period of regulated streamflow.



08091500 PALUXY RIVER AT GLEN ROSE, TX

LOCATION.--Lat 32°13'53", long 97°46'37", Somervell County, Hydrologic Unit 12060202, on left bank at downstream side of remaining pier of dismantled highway bridge, 500 ft upstream from bridge on U.S. Highway 67, 1.0 mi upstream from Cross Branch, 1.2 mi southwest of Glen Rose, and 5.1 mi upstream from mouth.

DRAINAGE AREA.--410 mi².

PERIOD OF RECORD.--Oct 1923 to Sep 1925, May 1947 to current year (water year 1924 is not complete). Prior to Oct 1965, published as Paluxy Creek at Glen Rose.

REVISED RECORDS.--WSP 1392: 1949, 1952. WSP 2122: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 609.66 ft above sea level. Oct 27, 1923 to Sep 30, 1925, nonrecording gage at bridge 1.8 mi downstream at datum 13.62 ft lower. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined capacity of 20,100 acre-ft. These structures control runoff from 90.8 mi².

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--57 years (water years 1925-81), 65.2 ft³/s (47,220 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1925-81).--Maximum discharge , 50,000 ft³/s Oct 4, 1959 (gage height, 25.40 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1877, 27.2 ft Apr 17, 1908, present site and datum (discharge, 59,000 ft³/s). Flood of May 21, 1922, reached a stage of 26.0 ft, present site and datum (discharge, 53,000 ft³/s). Flood in Nov 1918 reached about the same stage as flood of May 21, 1922, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	22	23	27	33	201	196	78	45	16	3.0	1.7
2	13	20	26	26	33	152	181	74	41	15	2.9	2.7
3	13	20	32	27	33	129	169	70	37	14	2.5	2.7
4	13	20	30	45	32	118	157	70	44	15	2.4	2.5
5	13	20	28	804	32	109	150	68	126	17	2.6	2.3
6	13	20	26	198	32	103	148	63	91	17	3.5	2.0
7	14	20	27	128	31	108	147	59	61	16	5.3	1.6
8	15	19	35	113	30	108	141	59	50	15	7.0	1.4
9	15	19	36	90	30	108	135	58	45	14	7.4	1.2
10	15	19	29	72	30	108	126	56	43	12	6.3	1.1
11	15	19	26	63	29	108	122	53	52	12	5.5	1.3
12	14	25	23	62	29	104	119	49	63	11	7.0	5.1
13	14	28	23	59	30	101	113	49	53	13	7.0	7.4
14	14	28	23	52	30	99	112	49	56	14	11	9.2
15	14	27	23	48	30	115	112	49	44	14	14	10
16	14	25	23	46	30	8670	110	48	37	13	15	12
17	14	23	23	42	30	2490	102	47	33	14	14	60
18	14	23	23	41	31	1720	95	45	31	14	12	38
19	14	23	23	39	35	1160	92	45	29	15	11	25
20	14	24	25	39	34	843	90	44	28	13	10	19
21	15	24	25	39	58	649	90	43	26	11	11	15
22	19	24	25	39	416	541	90	42	25	9.8	11	13
23	48	23	25	39	243	434	86	41	24	8.8	9.9	12
24	45	24	25	36	139	354	84	41	23	7.9	8.4	12
25	35	23	25	33	498	306	83	40	22	6.8	6.5	12
26	25	24	25	33	1070	270	81	39	20	6.0	6.5	11
27	22	24	25	32	535	240	80	171	20	5.2	5.5	11
28	22	26	25	32	363	224	78	174	19	5.0	5.1	11
29	22	24	25	32	---	208	78	86	17	4.3	4.5	11
30	22	23	26	32	---	196	78	61	17	3.5	6.6	9.5
31	23	---	28	33	---	198	---	50	---	3.0	4.9	---
TOTAL	577	683	806	2401	3946	20274	3445	1921	1222	355.3	229.3	323.7
MEAN	18.6	22.8	26.0	77.5	141	654	115	62.0	40.7	11.5	7.40	10.8
MAX	48	28	36	804	1070	8670	196	174	126	17	15	60
MIN	13	19	23	26	29	99	78	39	17	3.0	2.4	1.1
AC-FT	1140	1350	1600	4760	7830	40210	6830	3810	2420	705	455	642

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998z, BY WATER YEAR (WY)

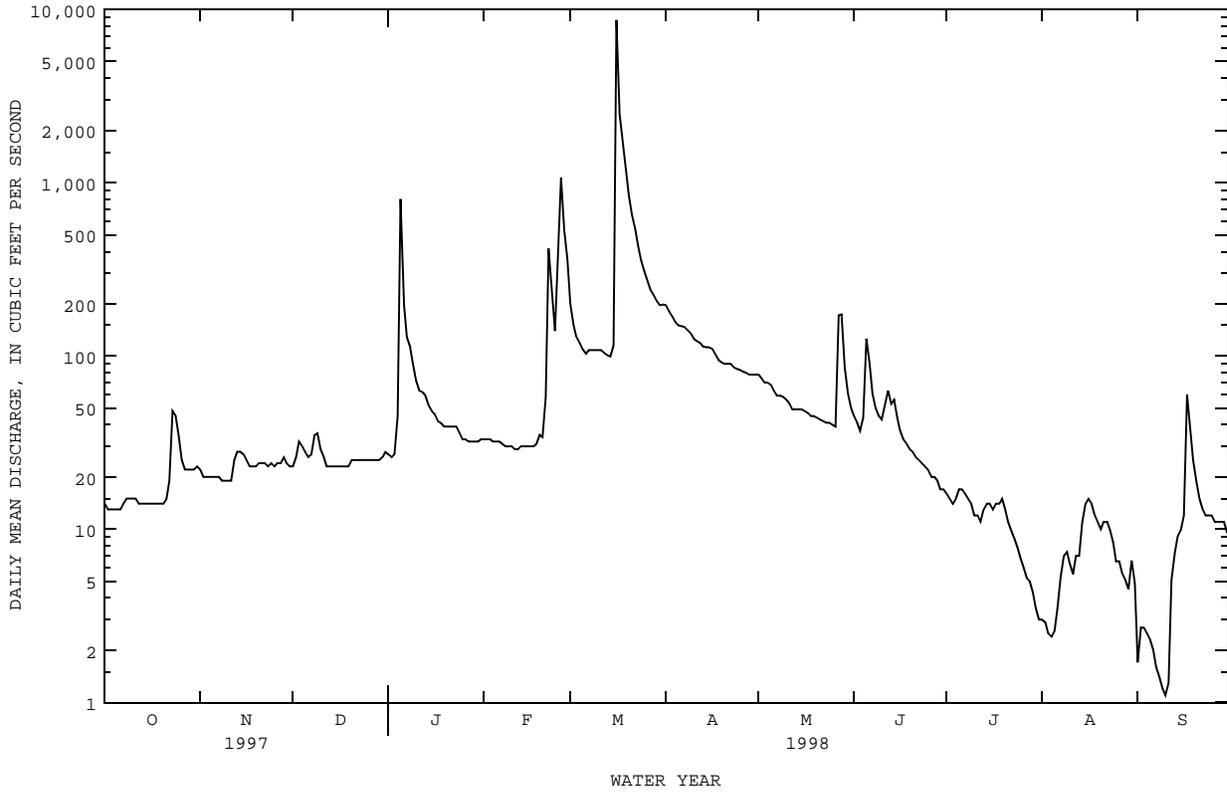
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	59.8	44.5	111	52.9	151	161	135	248	202	41.4	62.1	44.3					
MAX	424	211	1382	380	933	654	828	975	890	245	721	323					
(WY)	1992	1992	1992	1992	1992	1992	1992	1990	1989	1995	1995	1986					
MIN	.22	1.05	3.47	4.70	5.49	7.54	6.47	3.34	7.50	1.18	.000	.000					
(WY)	1984	1984	1989	1984	1984	1986	1986	1988	1984	1984	1984	1984					

BRAZOS RIVER BASIN

08091500 PALUXY RIVER AT GLEN ROSE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1982 - 1998z	
ANNUAL TOTAL	83389		36183.3		109	
ANNUAL MEAN	228		99.1		361	
HIGHEST ANNUAL MEAN					6.24	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	7970	Feb 20	8670	Mar 16	17200	Dec 20 1991
LOWEST DAILY MEAN	12	Sep 19	1.1	Sep 10	.00	Aug 28 1983
ANNUAL SEVEN-DAY MINIMUM	13	Sep 17	1.6	Sep 5	.00	Aug 28 1983
INSTANTANEOUS PEAK FLOW			18600	Mar 16	32300	Dec 20 1991
INSTANTANEOUS PEAK STAGE			17.07	Mar 16	21.28	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	165400		71770		79050	
10 PERCENT EXCEEDS	403		140		178	
50 PERCENT EXCEEDS	47		27		22	
90 PERCENT EXCEEDS	15		7.0		3.3	

z Period of regulated streamflow.



08091730 SQUAW CREEK RESERVOIR NEAR GLEN ROSE, TX

LOCATION.--Lat 32°18'00", long 97°47'12", Somervell County, Hydrologic Unit 12060202, on upstream side of intake structure near power house on Squaw Creek, 1.8 mi upstream from dam, 3.9 mi north of Glen Rose, and 6.1 mi upstream from mouth.

DRAINAGE AREA.--64.0 mi².

PERIOD OF RECORD.--Feb 1977 to current year.
Water-quality records.--Chemical analyses: Oct 1982 to Sep 1984.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--Records good. The reservoir is formed by a rolled earthfill dam 4,360 ft long. Deliberate impoundment began in Feb 1977, and the dam was completed in Jun 1977. The flood-control outlet works consist of an ungated 100-foot-long concrete ogee spillway located at right end of dam. The low-flow outlet works consist of a concrete outlet tower with three 4 by 6-foot slide gates and one 6 by 6-foot slide gate, which feed into a 6-foot inside diameter concrete conduit that extends through the dam. Water can be diverted by pipeline from Lake Granbury into this reservoir. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	796.0
Crest of spillway.....	783.0
Crest of spillway (normal operating level).....	775.0
Invert of slide gate (No. 1).....	764.0
Invert of slide gate (No. 2).....	715.0
Invert of slide gate (No. 3).....	666.5
Lowest gated outlet (invert).....	653.0

COOPERATION.--Capacity Table 1-C was provided by Texas Utilities Services, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 164,700 acre-ft, Dec 19, 1991 (elevation, 779.14 ft); minimum contents since first appreciable storage in 1979, 141,200 acre-ft, Sep 16, 1992 (elevation, 771.98 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 155,900 acre-ft, Mar 16 (elevation, 776.50 ft); minimum contents, 146,100 acre-ft, Feb 17 (elevation, 773.51 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149500	150400	150000	149200	147400	148400	151700	150300	150000	148800	149200	149800
2	149400	150300	150200	149100	147300	148300	151600	150300	149900	148800	149200	149800
3	149300	150300	150100	149100	147300	148200	151400	150300	149900	148800	149200	149900
4	149300	150400	150000	149100	147200	148100	151300	150300	150100	148900	149300	149900
5	149300	150500	149900	149200	147100	148000	151300	150300	150100	149000	149300	149900
6	149300	150500	149800	149300	146900	148100	151200	150200	150000	149100	149400	149900
7	149400	150500	150000	149200	146800	148100	151100	150200	150000	149100	149500	149900
8	149500	150600	150000	149200	146800	148000	151000	150200	149900	149100	149500	150000
9	149600	150600	149900	149100	146700	148000	151000	150000	149900	149100	149500	150000
10	149600	150600	149800	149000	146600	148000	150900	150000	149900	149200	149500	149900
11	149800	150700	149700	149100	146500	147900	150800	149900	149900	149200	149600	149900
12	150000	150900	149600	149000	146500	147900	150700	149900	149800	149200	149600	149800
13	149900	151000	149500	148900	146400	148000	150600	149800	149600	149200	149500	149800
14	149900	151100	149500	148900	146300	148200	150600	149800	149500	149300	149400	149900
15	149900	150900	149400	148700	146300	148500	150500	149700	149300	149400	149300	150000
16	150000	150900	149300	148600	146200	155800	150400	149600	149100	149400	149200	150200
17	150000	150800	149300	148500	146200	155100	150300	149500	148900	149500	149200	150200
18	150000	150700	149300	148400	146300	154500	150300	149400	148800	149500	149300	150400
19	150000	150600	149200	148400	146400	153800	150300	149300	148800	149500	149300	150400
20	150000	150600	149800	148300	146500	153400	150400	149300	148800	149500	149400	150500
21	150000	150500	149900	148200	147200	153100	150300	149300	148700	149500	149400	150600
22	150000	150500	149900	148100	147600	152900	150400	149300	148700	149500	149400	150600
23	150400	150400	149900	148000	147600	152700	150400	149300	148600	149500	149400	150600
24	150500	150400	149800	147900	147500	152500	150300	149300	148600	149500	149500	150700
25	150300	150300	149800	147900	148300	152300	150300	149300	148600	149400	149500	150700
26	150200	150300	149700	147700	148600	152200	150300	149400	148600	149400	149500	150700
27	150200	150300	149600	147600	148600	152000	150300	149900	148700	149400	149600	150800
28	150200	150300	149500	147600	148500	151900	150200	150000	148700	149400	149600	150900
29	150200	150200	149400	147500	---	151900	150200	150000	148700	149300	149600	151000
30	150300	150100	149300	147400	---	151900	150300	150000	148800	149200	149700	151000
31	150400	---	149200	147500	---	151700	---	150000	---	149200	149700	---
MAX	150500	151100	150200	149300	148600	155800	151700	150300	150100	149500	149700	151000
MIN	149300	150100	149200	147400	146200	147900	150200	149300	148600	148800	149200	149800
(+)	774.83	774.74	774.47	773.94	774.24	775.24	774.79	774.71	774.33	774.46	774.63	775.02
(@)	+800	-300	-900	-1700	+1000	+3200	-1400	-300	-1200	+400	+500	+1300
CAL YR 1997	MAX 157000	MIN 144300	(@)	+1400								
WTR YR 1998	MAX 155800	MIN 146200	(@)	+2000								

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08091750 SQUAW CREEK NEAR GLEN ROSE, TX

LOCATION.--Lat 32°16'12", long 97°43'56", Somervell County, Hydrologic Unit 12060202, on left bank at downstream side of highway embankment 25 ft left of left end of bridge on State Highway 144, 2.1 mi upstream from mouth, 2.5 mi downstream from Squaw Creek Dam, and 2.8 mi northeast of Glen Rose.

DRAINAGE AREA.--70.3 mi².

PERIOD OF RECORD.--Oct 1973 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 599.00 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since Feb 15, 1977, at least 10% of contributing drainage area has been regulated by Squaw Creek Reservoir. No known diversions between Squaw Creek Reservoir and this station. During the year, low flows were sustained by releases from a pipeline used to divert water from Lake Granbury (station 08090900) to Squaw Creek Reservoir (station 08091730). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--4 years (1974-77) prior to regulation by Squaw Creek Reservoir 8.41 ft³/s (6,090 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1974-77).--Maximum discharge 9,030 ft³/s Apr 8, 1975 (gage height, 11.90 ft), from rating curve extended above 1,000 ft³/s on basis of area-velocity study); minimum, 0.02 ft³/s Aug 28 and 29, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1934, about 20.5 ft in May 1957, from information by Texas Department of Transportation (discharge not determined).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	1.6	2.2	1.1	2.5	5.8	20	4.6	3.2	4.0	2.1	2.7
2	2.5	3.0	2.7	1.2	2.0	5.8	14	4.6	3.1	4.0	2.2	2.8
3	2.6	2.6	2.5	1.4	2.0	5.8	22	4.5	3.2	4.0	2.2	2.7
4	2.6	1.9	2.1	1.4	2.1	6.0	8.5	4.6	4.6	4.3	2.3	2.7
5	2.5	1.9	2.0	1.3	2.1	5.7	6.5	4.6	4.1	4.5	2.6	2.7
6	2.8	1.9	2.0	1.9	2.1	5.8	6.6	4.7	3.5	4.2	2.5	2.9
7	3.5	2.0	3.5	2.6	2.2	6.0	7.9	4.7	3.7	4.1	2.6	2.9
8	3.2	2.0	2.3	1.6	2.2	10	9.6	4.7	3.8	3.8	2.6	2.8
9	2.9	2.3	3.2	1.4	2.4	5.7	6.3	6.0	3.3	3.8	2.5	2.7
10	2.8	5.1	2.9	1.4	2.4	5.5	5.8	4.5	2.0	3.7	2.5	2.7
11	3.4	2.0	2.3	2.2	2.4	5.5	5.8	4.3	4.0	3.6	2.6	3.1
12	4.2	2.4	2.1	1.4	2.5	5.7	5.8	4.3	2.5	3.7	2.7	3.4
13	2.8	2.5	2.1	1.4	2.4	5.7	5.8	4.3	4.0	4.2	2.9	3.3
14	2.3	2.1	2.1	1.4	2.3	5.9	5.9	4.4	3.9	3.9	3.1	3.1
15	2.3	3.4	2.1	1.4	2.3	6.4	6.0	4.3	3.8	4.2	2.8	3.0
16	2.2	2.4	2.1	1.5	2.3	1060	6.2	4.1	3.8	3.9	2.7	3.3
17	2.1	2.5	2.1	1.5	2.1	374	5.8	4.1	3.9	4.0	2.6	3.0
18	2.1	2.5	2.1	1.5	2.2	244	5.8	4.1	3.9	4.0	2.8	3.0
19	2.1	2.5	2.0	1.5	2.1	179	6.0	3.8	3.8	4.0	2.7	2.8
20	2.0	2.8	1.2	1.5	2.0	122	6.2	3.8	3.7	3.9	2.7	2.8
21	2.0	3.2	9.3	1.6	13	97	6.5	3.9	3.6	3.0	2.7	2.7
22	2.1	2.7	7.0	1.7	8.2	85	6.2	3.9	3.7	2.8	2.8	2.7
23	4.6	2.5	.89	1.7	1.4	77	6.2	3.8	3.8	2.6	2.8	2.8
24	2.1	2.6	.92	1.8	1.4	70	6.3	3.8	4.0	2.6	2.6	2.7
25	4.1	2.6	.69	1.7	1.25	62	6.3	3.8	3.9	2.4	2.6	2.6
26	8.1	2.5	.75	1.7	45	51	6.3	3.8	3.9	2.2	2.5	2.6
27	1.8	2.6	.74	1.7	7.2	47	6.1	6.5	3.9	2.2	2.4	2.6
28	1.6	3.4	3.3	1.8	6.1	38	5.9	3.4	3.9	2.2	2.4	2.6
29	1.5	5.1	1.2	1.8	---	31	5.0	3.3	4.0	2.2	2.4	2.7
30	1.5	3.8	1.0	1.9	---	28	4.7	3.4	4.0	2.2	2.8	2.7
31	1.5	---	1.0	2.2	---	36	---	3.2	---	2.2	2.8	---
TOTAL	84.3	80.4	83.19	50.2	251.9	2692.3	226.0	131.8	110.5	106.4	80.5	85.1
MEAN	2.72	2.68	2.68	1.62	9.00	86.8	7.53	4.25	3.68	3.43	2.60	2.84
MAX	8.1	5.1	12	2.6	125	1060	22	6.5	4.6	4.5	3.1	3.4
MIN	1.5	1.6	.69	1.1	1.4	5.5	4.7	3.2	2.0	2.2	2.1	2.6
AC-FT	167	159	165	100	500	5340	448	261	219	211	160	169

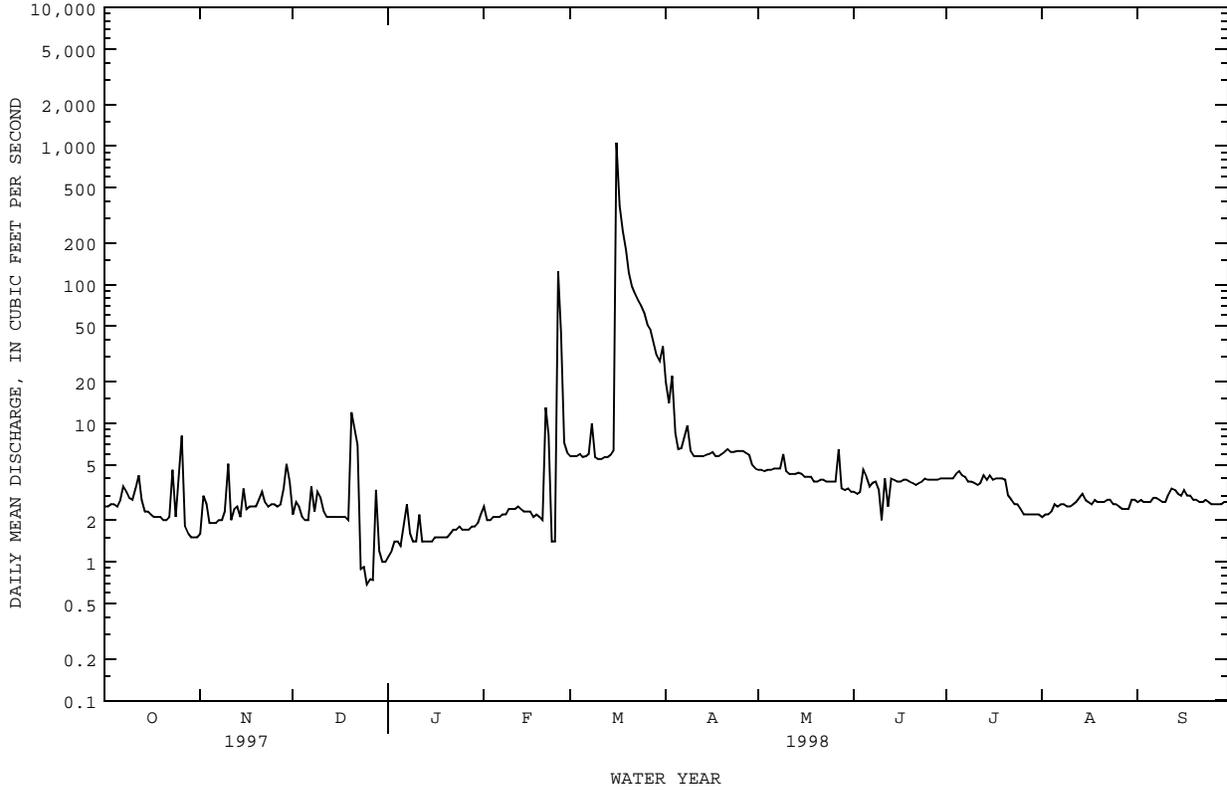
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1998z, BY WATER YEAR (WY)

MEAN	9.70	8.02	24.1	7.63	19.2	29.9	21.6	52.4	42.0	7.08	11.6	6.25
MAX	110	81.5	416	66.0	162	132	169	336	362	36.0	143	31.1
(WY)	1992	1992	1992	1992	1992	1992	1990	1989	1989	1995	1995	1996
MIN	1.54	1.95	2.36	1.62	2.46	1.61	1.78	2.39	1.28	1.59	1.47	1.91
(WY)	1993	1993	1978	1998	1978	1978	1978	1978	1978	1978	1992	1994

08091750 SQUAW CREEK NEAR GLEN ROSE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1978 - 1998z	
ANNUAL TOTAL	10411.79		3982.59		20.0	
ANNUAL MEAN	28.5		10.9		89.9	
HIGHEST ANNUAL MEAN					2.18	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	704	Feb 21	1060	Mar 16	4380	Dec 20 1991
LOWEST DAILY MEAN	.69	Dec 25	.69	Dec 25	.54	Aug 5 1996
ANNUAL SEVEN-DAY MINIMUM	1.2	Dec 23	1.2	Dec 29	.70	Oct 22 1992
INSTANTANEOUS PEAK FLOW			5000	Mar 16	8940	Jun 13 1989
INSTANTANEOUS PEAK STAGE			9.54	Mar 16	11.85	Jun 13 1989
ANNUAL RUNOFF (AC-FT)	20650		7900		14460	
10 PERCENT EXCEEDS	78		6.4		21	
50 PERCENT EXCEEDS	3.4		2.8		4.0	
90 PERCENT EXCEEDS	2.1		1.7		2.2	

z Period of regulated streamflow.



BRAZOS RIVER BASIN

08092000 NOLAN RIVER AT BLUM, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 32°09'02", long 97°24'09", Hill County, Hydrologic Unit 12060202, on right bank 60 ft upstream from bridge on Farm Road 933, 0.6 mi northwest of Blum 2.8 mi downstream from Mustang Creek, 3.0 mi downstream from Gulf, Colorado, and Santa Fe Railway Co. bridge, 3.2 mi upstream from Rock Creek, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--282 mi².

PERIOD OF RECORD.--Jul 1924 to Sep 1925. Nov 1947 to Sep 1985. Oct 1985 to current year (peaks above base discharge).

REVISED RECORDS.--WSP 1312: 1925(M). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 551.48 ft above sea level. Jul 29, 1924 to Sep 30, 1925 and Nov 14, 1947 to May 28, 1949 nonrecording gage at railway bridge (now abandoned) 0.5 mi upstream at datum 5.00 ft higher. May 29 to Jul 7, 1949, nonrecording gage at present site and datum then in use (5.00 ft higher than present datum). Satellite telemeter at station.

REMARKS.--Records good. Daily mean and peak discharges less than 1,200 ft³/s are not published. Since water year 1965, at least 10% of contributing drainage area has been regulated by Lake Pat Cleburne (station 08091900) located 13 mi upstream. The city of Cleburne diverts water from Lake Pat Cleburne and returns wastewater effluent to a tributary upstream.

AVERAGE DISCHARGE.--17 years (water years 1925, 1949-64) prior to regulation by Lake Pat Cleburne, 66.1 ft³/s (47,890 acre-ft/yr); 21 years (water years 1965-85) regulated, 81.2 ft³/s (58,830 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge prior to regulation by Lake Pat Cleburne, 25,000 ft³/s May 17, 1949 (gage height, 24.0 ft, from floodmark); maximum discharge for regulated period 79,600 ft³/s May 17, 1989 (gage height, 33.44 ft), from rating curve extended above 22,200 ft³/s on basis of contracted-opening measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1887, 35.0 ft May 8, 1922, present site and datum, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,220 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 23	1845	1,810	5.56	Feb 22	0615	1,260	4.75
Dec 20	2230	6,650	10.38	Feb 26	0715	6,880	10.57
Jan 6	0630	2,430	6.33	Mar 16	1715	17,900	17.98
Jan 6	2345	3,090	7.08	Mar 19	0615	1,670	5.39

08092500 LAKE WHITNEY NEAR WHITNEY, TX

LOCATION.--Lat 31°51'55", long 97°22'18", Bosque County, Hydrologic Unit 12060202, on State Highway 22, in intake structure of Whitney Dam on Brazos River, 2.4 mi upstream from Coon Creek, 3.5 mi upstream from Iron Creek, 7.4 mi southwest of Whitney, at mile 442.4.

DRAINAGE AREA.--27,189 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Dec 1951 to current year. Prior to Oct 1970, published as Whitney Reservoir. Prior to Oct 1980, published as Whitney Lake.

Water-quality records.--Chemical analyses: Mar 1960 to Sep 1987. Chemical and biochemical analyses: Sep 1970 to Aug 1987.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--The lake is formed by a concrete-gravity and rolled earthfill dam 17,695 ft long, including spillway. The dam was completed in Apr 1951, and deliberate impoundment began Dec 10, 1951. Concrete spillway is 680 ft long and includes 17 tainter gates 38.0 by 40.0 ft each. Outlet works are comprised of 16 gate-operated conduits that are 5.0- by 9.0 ft each. The space between elevations 522.0 and 571.0 ft is reserved for flood-control storage. At maximum design elevation of 573.0 ft the spillway is designed to discharge 684,000 ft³/s. The capacity table is based on a survey made in Apr and May 1959. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	584.0
Design flood.....	573.0
Top of gates.....	571.0
Crest of spillway (sill of gates).....	533.0
Top of conservation pool (top of designated power storage).....	533.0
Lowest controlled outlet (invert).....	448.83

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,980,000 acre-ft, May 29, 1957 (elevation, 570.25 ft); minimum since power pool elevation first reached in Apr 1954, 250,200 acre-ft, Nov 1, 1956 (elevation 509.52 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 764,200 acre-ft, Mar 18 (elevation, 538.43 ft); minimum daily contents, 443,400 acre-ft, Sep 30 (elevation, 523.97 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	547800	534900	511600	531500	586100	630800	639600	624700	612800	567500	515400	475600
2	545400	534000	511600	531500	587000	628700	637300	625400	611400	564000	512600	473800
3	544600	531900	510800	531900	587500	628500	634900	626600	610300	563300	509000	470900
4	544100	530100	509600	535500	587300	627300	631300	626600	612600	565500	508000	467900
5	543700	530300	509600	541200	586800	626400	630600	625700	612800	566200	508400	465600
6	544100	528000	509000	556100	584300	624000	631100	624900	611700	564900	508200	465200
7	544100	526200	508600	570800	583200	624000	630100	624700	611200	563100	505700	464900
8	544100	524900	508400	576300	583900	623100	631100	625200	609600	560500	505300	463600
9	544400	525500	508600	578300	583700	621700	630800	628200	607300	558300	503300	463100
10	544800	523300	507400	578100	585900	621900	629900	628000	607700	555700	501400	462600
11	544400	520800	505100	577400	584100	625400	630600	628000	608200	553100	501400	463800
12	547100	522100	504700	579400	585900	624900	631100	628700	606100	550500	499500	464000
13	546900	521200	502400	579000	586100	627500	629200	629000	604300	548000	499500	463500
14	545400	521900	500200	579400	586400	630600	627300	629400	602900	546700	501000	461700
15	544600	520600	498300	578100	587300	634600	624700	629000	601100	544400	499300	459500
16	543900	518200	498900	579700	587900	727600	626600	627800	598100	543300	497000	461400
17	543900	516400	497500	579200	587500	759600	627100	627500	594900	543700	494900	461200
18	542000	515000	496600	581900	587700	764200	626800	625900	593400	543500	494500	460500
19	541400	513400	496200	581700	588800	752100	626800	624900	591100	542000	493100	459500
20	539300	513600	514400	583000	587900	734200	628000	625200	588400	540100	490300	457700
21	537600	513200	528000	585900	590200	702900	627500	626100	587000	538000	489600	455800
22	535500	512600	529200	585200	594900	672500	626800	627100	585200	535700	489600	454300
23	541400	511600	532800	584600	599500	658000	624900	626400	585000	533400	489700	451200
24	542400	511000	534200	582800	602700	654600	621000	625400	583900	531700	489000	450500
25	544100	510800	535900	580100	609800	649000	622400	624700	583400	528200	487100	450400
26	541400	511600	536300	580500	635100	644200	625700	622100	581200	527600	484000	450200
27	538900	512200	535300	579000	638200	642500	625700	623100	578500	525700	482100	449000
28	537600	513800	534200	579400	635800	640600	625200	620500	575400	523700	480800	447000
29	537000	514400	531100	580800	---	638200	624700	617900	573400	520800	479700	445400
30	536500	513400	531500	581900	---	639900	624700	617200	570600	518800	478100	443400
31	535500	---	531300	584300	---	638200	---	614900	---	517800	476500	---
MAX	547800	534900	536300	585900	638200	764200	639600	629400	612800	567500	515400	475600
MIN	535500	510800	496200	531500	583200	621700	621000	614900	570600	517800	476500	443400
(+)	528.90	527.81	528.69	531.13	533.36	533.46	532.90	532.48	530.52	528.03	525.87	523.97
(@)	-14000	-22100	+17900	+53000	+51500	+2400	-13500	-9800	-44300	-52800	-41300	-33100
CAL YR 1997	MAX 913200	MIN 496200	(@) -91300									
WTR YR 1998	MAX 764200	MIN 443400	(@) -106100									

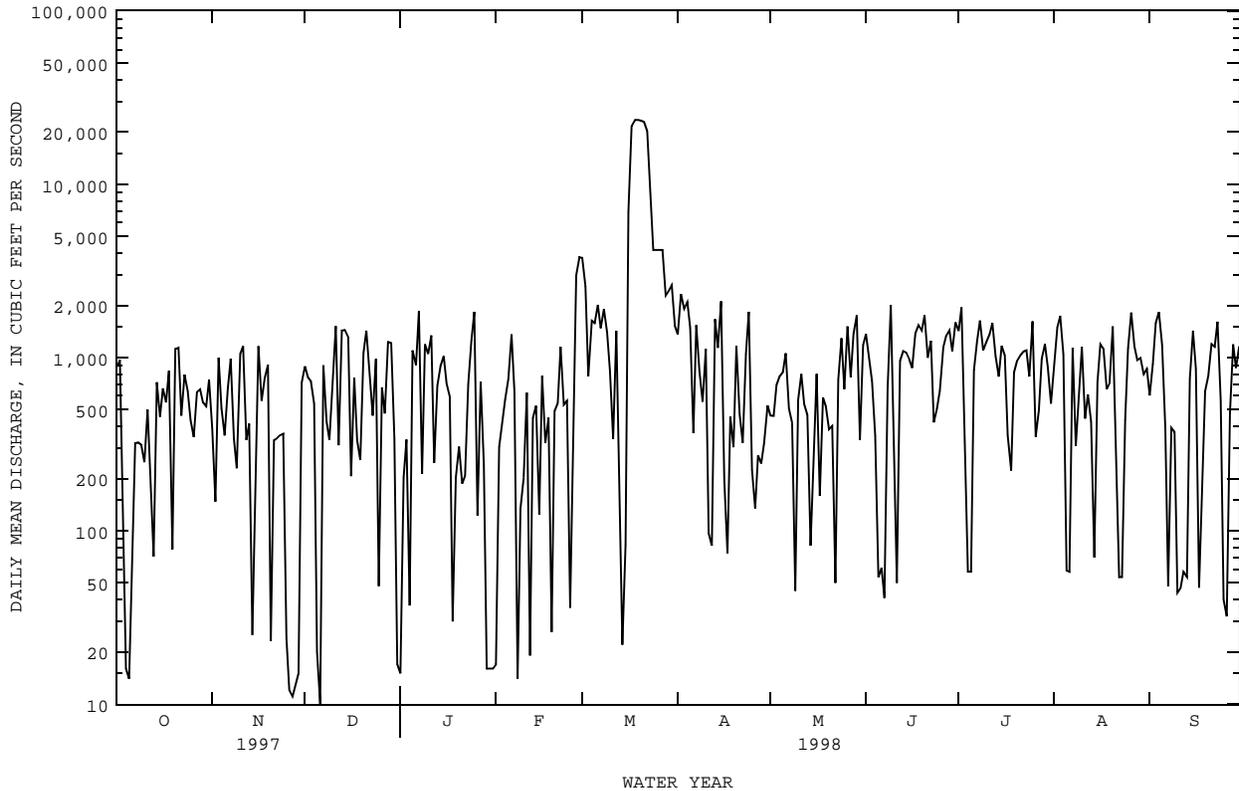
(+) Elevation, in feet, at end of month.

(@) Change in contents, in acre-feet.

08093100 BRAZOS RIVER NEAR AQUILLA, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998z	
ANNUAL TOTAL	1076073		435348			
ANNUAL MEAN	2948		1193		1647	
HIGHEST ANNUAL MEAN					6566	1992
LOWEST ANNUAL MEAN					141	1953
HIGHEST DAILY MEAN	20900	Feb 24	23500	Mar 18	66100	May 18 1949
LOWEST DAILY MEAN	10	Dec 6	10	Dec 6	.40	May 9 1953
ANNUAL SEVEN-DAY MINIMUM	114	Nov 23	114	Nov 23	.80	May 4 1953
INSTANTANEOUS PEAK FLOW			23800	Mar 18	g71800	May 18 1949
INSTANTANEOUS PEAK STAGE			21.35	Mar 18	g31.03	May 18 1949
ANNUAL RUNOFF (AC-FT)	2134000		863500		1194000	
10 PERCENT EXCEEDS	7300		1650		3340	
50 PERCENT EXCEEDS	1140		664		645	
90 PERCENT EXCEEDS	260		54		48	

z Period of regulated streamflow.
g At site and datum then in use.



BRAZOS RIVER BASIN

08093350 AQUILLA LAKE ABOVE AQUILLA, TX

LOCATION.--Lat 31°53'59", long 97°12'09", Hill County, Hydrologic Unit 12060202, 450 ft upstream from Farm Road 310 it runs along top of Aquilla Dam on Aquilla Creek, and 3.4 miles north-northeast of Aquilla.

DRAINAGE AREA.--255 mi².

PERIOD OF RECORD.--Oct 1983 to current year.

Water-quality records.--Chemical and biochemical analyses: Feb 1984 to Jul 1992.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--The lake is formed by an earthfill dam with a crest length of 11,890 ft and a top width of 38.0 ft. A reinforced concrete inlet structure, near center of dam, houses the flood-control gates and operating equipment. Closure of the dam began Mar 20, 1982, and the dam was completed in Jan 1983. The dam was built and is owned by the U.S. Army Corps of Engineers. Deliberate impoundment began Apr 29, 1983. The lake was built for water supply, flood control, and recreation purposes. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	582.5
Spillway crest (uncontrolled).....	564.5
Top of flood-control pool.....	556.0
Top of conservation pool.....	537.5
Lowest gated outlet (invert).....	503.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 119,000 acre-ft, Dec 23, 1991 (elevation, 551.89 ft); minimum observed, 4,600 acre-ft, Oct 6-10, 1983 (elevation, 511.31 ft Oct 6, 7, 9, 10 and 511.30 ft Oct 8).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 83,210 acre-ft, Dec 22 (elevation, 546.58 ft); minimum daily contents, 38,540 acre-ft, Sep 30 (elevation, 535.05 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41060	45540	45120	55690	46420	52810	48550	46220	44510	42290	41000	39400
2	40970	45470	45340	54000	46480	51810	48250	46150	44420	42190	41000	39310
3	40880	45380	45500	52450	46550	49680	47980	46150	44290	42100	41000	39250
4	40850	45150	45500	51950	46580	48860	47680	46060	44420	42190	40940	39170
5	40740	45180	45500	57610	46650	48490	47270	45990	44450	42100	40940	39050
6	40760	45120	45440	61680	46650	47980	46910	46020	44320	42040	40940	38990
7	40850	45060	45700	68700	46680	47880	46840	45990	44170	41950	40940	38940
8	41090	44990	46020	69480	46710	47910	46810	45860	44040	41860	40940	38850
9	41090	45060	46190	67490	46740	47610	46780	45890	44010	41770	40940	38790
10	41060	45020	46190	64490	47610	47370	46710	45800	43980	41680	40940	38710
11	41090	44990	46150	61480	47580	47140	46550	45670	44040	41560	40940	38770
12	41300	45220	46120	58530	47140	47140	46450	45600	43980	41530	39950	38790
13	41270	45220	46090	55470	46940	47140	46450	45570	43890	41440	40120	38770
14	41210	45250	46090	52990	46910	47410	46380	45500	43890	41500	40320	38770
15	41150	45180	46020	50720	46880	49000	46350	45500	43820	41420	40270	38820
16	41120	45120	46060	49650	46810	53750	46320	45440	43640	41390	40180	38970
17	41060	45060	46060	49170	46740	62810	46250	45410	43510	41300	40120	38970
18	41000	45060	45990	48660	46710	63260	46220	45280	43450	41240	40090	38910
19	40910	44990	46020	48180	46810	64290	46150	45220	43360	41120	40060	38880
20	40910	44990	46980	47780	46710	62970	46320	45150	43230	41060	40000	38850
21	40910	45020	46980	48490	47040	60600	46350	45090	43140	41000	39920	38770
22	40850	44990	83210	48520	49340	58180	46320	44990	43080	41000	39860	38770
23	43110	44960	82160	48180	49720	55650	46280	44960	42960	41000	39800	38850
24	45630	44900	80350	47740	49920	53170	46120	44860	42830	41000	39770	38790
25	45800	44900	76940	47340	50690	50720	46090	44860	42770	41000	39710	38740
26	45700	44930	73600	46810	53930	48930	46320	44860	42710	41000	39630	38680
27	45600	44900	69960	46550	53380	48210	46320	44930	42590	41000	39570	38680
28	45540	45150	66460	46420	52920	47910	46280	44860	42500	41000	39540	38650
29	45470	45180	62930	46380	---	47780	46250	44830	42440	41000	39510	38590
30	45540	45150	59970	46350	---	48450	46220	44740	42350	41000	39480	38540
31	45600	---	57800	46280	---	48690	---	44670	---	41000	39420	---
MAX	45800	45540	83210	69480	53930	64290	48550	46220	44510	42290	41000	39400
MIN	40740	44900	45120	46280	46420	47140	46090	44670	42350	41000	39420	38540
(+)	537.35	537.23	540.77	537.55	539.47	538.25	537.53	537.09	536.34	535.90	535.35	535.05
(@)	+4510	-450	+12650	-11520	+6640	-4230	-2470	-1550	-2320	-1350	-1580	-880

CAL YR 1997 MAX 83210 MIN 40740 (@) +11020
WTR YR 1998 MAX 83210 MIN 38540 (@) -2550

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08093500 AQUILLA CREEK NEAR AQUILLA, TX

LOCATION.--Lat 31°50'40", long 97°12'04", Hill County, Hydrologic Unit 12060202, at downstream side of highway embankment near left end of bridge on Farm Road 1304, 1.0 mi southeast of Aquilla, 1.2 mi downstream from Cobb Creek, 4.7 mi below Aquilla Dam, and 18.2 mi upstream from mouth.

DRAINAGE AREA.--308 mi².

PERIOD OF RECORD.--Jan 1939 to current year. Records of daily discharges for Dec 1924 to Aug 1925, published in WSP 608, are unreliable, and should not be used.

Water-quality records.--Chemical analysis: Mar 1960 to Jun 1966, Oct 1967 to Sep 1993. Chemical and biochemical analysis: Jan 1968 to Sep 1992. Specific conductance: May 1965 to Jun 1966, Nov 1967 to Sep 1982. Water temperature: May 1965 to Jun 1966, Nov 1967 to Sep 1982.

REVISED RECORDS.--WSP 1712: 1944(M), 1957-58. WDR TX-76-2: Drainage area. See PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 451.48 ft above sea level (levels by U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good except those for daily discharges below 20 ft³/s, which are fair. Since Apr 1983, at least 10% of contributing drainage area has been regulated by Aquilla Lake (station 08093350), 4.7 mi upstream.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--43 years (water years 1940-82) 119 ft³/s (5.25 in/yr), 86,220 acre-ft/yr.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1939-82).--Maximum discharge, 53,300 ft³/s Jun 16, 1981 (gage height, 31.35 ft), from rating curve extended above 25,900 ft³/s on basis of slope-area measurement of 74,200 ft³/s; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug 31, 1887, reached a stage of 34 ft, from information by local resident. Flood of Sep 27, 1936, was the highest since 1887 and reached a stage of 33 ft from floodmark; discharge 84,500 ft³/s (by slope-area measurements at site 9 mi downstream) and 74,200 ft³/s (adjusted to gage site).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	5.3	13	1090	11	792	112	4.7	.00	.00	.00	.06
2	.00	4.7	14	952	8.9	787	193	4.8	.00	.00	.00	.02
3	.01	4.5	19	804	7.7	784	194	4.0	.00	.00	1.0	.00
4	.03	4.6	14	836	7.7	586	193	5.0	.00	.00	4.2	.00
5	.00	5.0	12	1440	9.0	380	192	4.3	.00	.00	.00	.00
6	.00	5.2	11	2050	10	329	193	4.3	.00	.00	.00	.00
7	.28	6.2	17	1810	10	240	110	3.0	.00	.00	1.2	.00
8	2.8	6.9	22	959	11	247	24	2.1	.00	.00	2.7	.00
9	2.5	7.3	6.5	1170	12	241	23	1.5	.00	.00	3.4	.00
10	.99	8.6	2.8	1550	24	239	22	.87	.00	.00	3.4	.00
11	.76	9.1	2.3	1530	182	200	23	.93	.00	.00	2.2	.00
12	1.5	11	3.1	1530	368	17	22	.63	.00	.00	1.5	.00
13	2.2	12	4.0	1490	229	17	23	.49	.00	.00	2.0	.00
14	1.9	11	5.4	1310	77	18	23	.33	.00	.00	1.4	.00
15	1.2	11	5.9	1080	75	53	22	.12	.00	.00	.86	.00
16	1.0	9.3	6.9	748	75	869	23	.03	.00	.00	.22	.06
17	.97	9.3	8.1	310	75	200	15	.00	.00	.00	.09	.01
18	.88	9.6	8.3	309	75	519	1.2	.00	.00	.00	.07	.00
19	.72	10	9.0	308	85	1550	2.0	.00	.00	.00	.21	.00
20	.58	11	1780	306	120	1060	4.3	.00	.00	.00	.11	.00
21	.66	11	3540	371	219	1210	9.1	.00	.00	.00	.17	.00
22	1.1	11	492	342	460	1200	7.1	.00	.00	.00	.37	.00
23	5.9	12	1050	314	154	1180	5.3	.00	.00	.00	.64	.64
24	11	11	1400	309	21	1170	5.8	.00	.00	.00	.71	.51
25	2.8	12	1780	309	21	1160	3.0	.00	.00	.00	.64	.56
26	1.2	12	1770	309	559	920	3.3	.00	.00	.00	.13	.45
27	2.0	12	1750	207	596	448	5.5	.00	.00	.00	.17	.22
28	3.1	13	1740	89	802	214	3.7	.00	.00	.00	.05	.13
29	3.5	15	1710	88	---	114	4.7	.00	.00	.00	.00	.09
30	4.2	13	1450	52	---	43	2.9	.00	.00	.00	.54	.07
31	5.0	---	1100	9.7	---	129	---	.00	---	.00	.26	---
TOTAL	58.81	283.6	19746.3	23981.7	4304.3	16916	1464.9	37.10	0.00	0.00	28.24	2.82
MEAN	1.90	9.45	637	774	154	546	48.8	1.20	.000	.000	.91	.094
MAX	11	15	3540	2050	802	1550	194	5.0	.00	.00	4.2	.64
MIN	.00	4.5	2.3	9.7	7.7	17	1.2	.00	.00	.00	.00	.00
AC-FT	117	563	39170	47570	8540	33550	2910	74	.00	.00	56	5.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998z, BY WATER YEAR (WY)

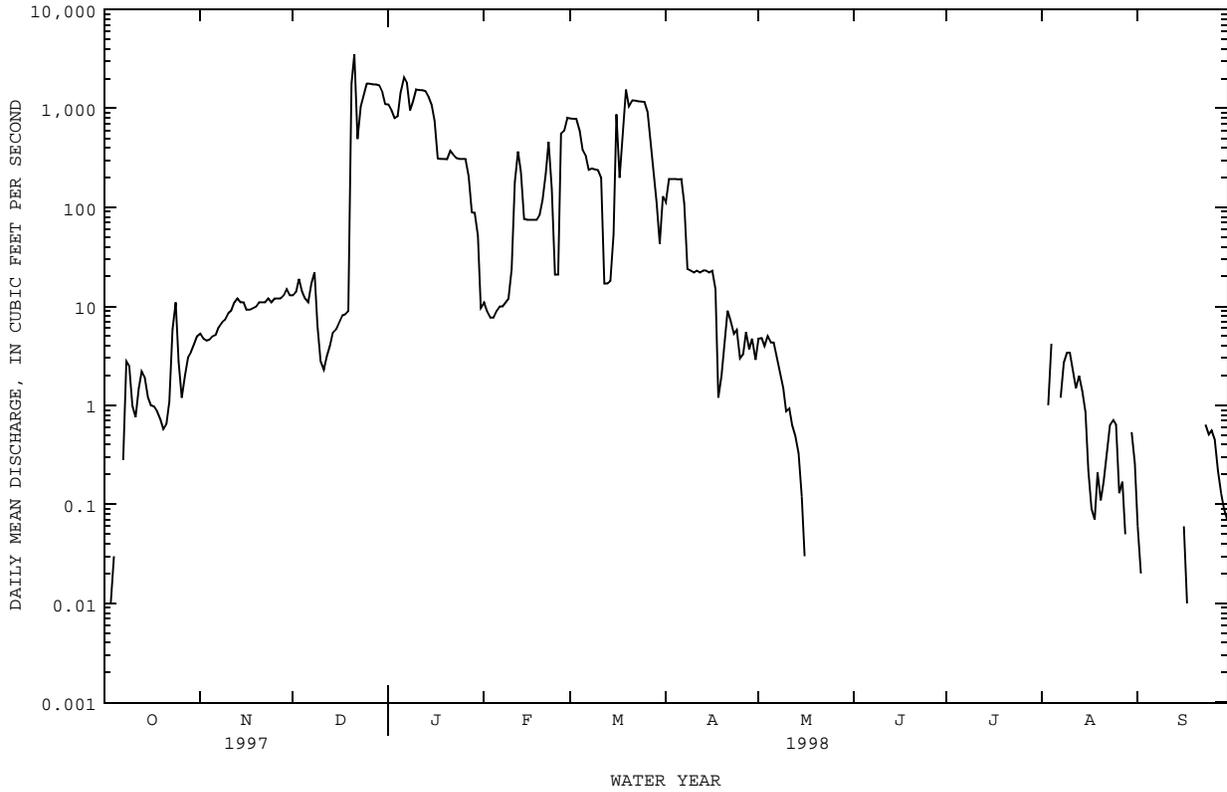
	1983	1983	1990	1984	1984	1996	1984	1984	1998	1984	1984	1983
MEAN	41.4	59.8	170	185	189	263	129	219	192	24.9	15.1	6.52
MAX	237	392	640	1221	924	1054	674	1281	717	111	122	39.8
(WY)	1994	1992	1992	1992	1997	1992	1995	1995	1987	1987	1995	1991
MIN	.000	.15	.32	.59	.18	.58	1.00	.021	.000	.000	.000	.000
(WY)	1983	1983	1990	1984	1984	1996	1984	1984	1998	1984	1984	1983

BRAZOS RIVER BASIN

08093500 AQUILLA CREEK NEAR AQUILLA, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1983 - 1998z	
ANNUAL TOTAL	88056.52		66823.77			
ANNUAL MEAN	241		183		124	
HIGHEST ANNUAL MEAN					396	1992
LOWEST ANNUAL MEAN					2.24	1984
HIGHEST DAILY MEAN	3540	Dec 21	3540	Dec 21	3990	Dec 21 1991
LOWEST DAILY MEAN	.00	Aug 11	.00	Oct 2	.00	Oct 1 1982
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 11	.00	May 17	.00	Oct 1 1982
INSTANTANEOUS PEAK FLOW			14200	Dec 21	14200	Dec 21 1997
INSTANTANEOUS PEAK STAGE			28.38	Dec 21	28.38	Dec 21 1997
ANNUAL RUNOFF (AC-FT)	174700		132500		90110	
10 PERCENT EXCEEDS	1060		796		392	
50 PERCENT EXCEEDS	18		4.0		5.9	
90 PERCENT EXCEEDS	.07		.00		.00	

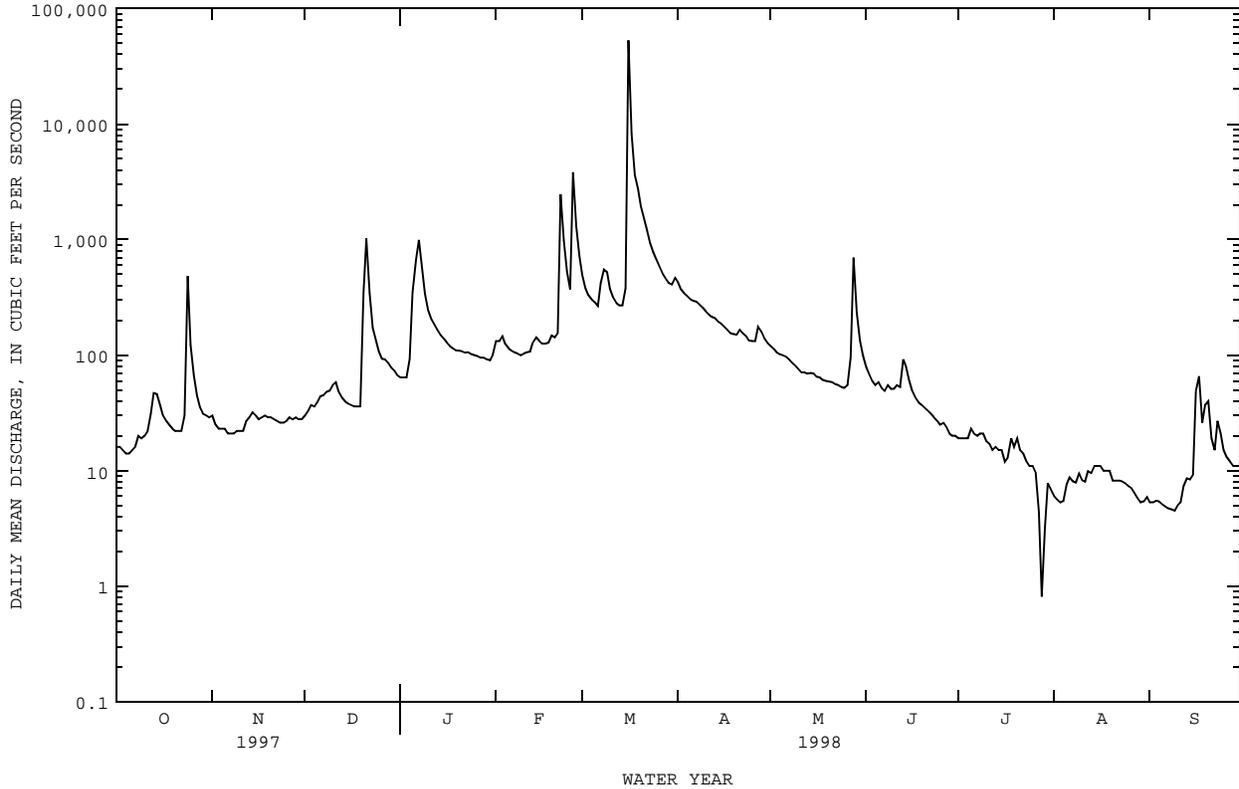
z Period of regulated streamflow.



08095000 NORTH BOSQUE RIVER NEAR CLIFTON, TX--Continued
(Hydrologic index station)

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1968 - 1998z	
ANNUAL TOTAL	257266		119719.31			
ANNUAL MEAN	705		328		250	
HIGHEST ANNUAL MEAN					1366	
LOWEST ANNUAL MEAN					11.7	
HIGHEST DAILY MEAN	24000	Feb 20	53200	Mar 16	96800	Dec 21 1991
LOWEST DAILY MEAN	14	Oct 4	.81	Jul 28	.01	Oct 28 1983
ANNUAL SEVEN-DAY MINIMUM	15	Oct 1	4.9	Sep 5	.03	Oct 28 1983
INSTANTANEOUS PEAK FLOW			137000	Mar 16	200000	Dec 20 1991
INSTANTANEOUS PEAK STAGE			34.88	Mar 16	38.30	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	510300		237500		180900	
10 PERCENT EXCEEDS	1450		373		384	
50 PERCENT EXCEEDS	156		51		30	
90 PERCENT EXCEEDS	22		8.2		3.5	

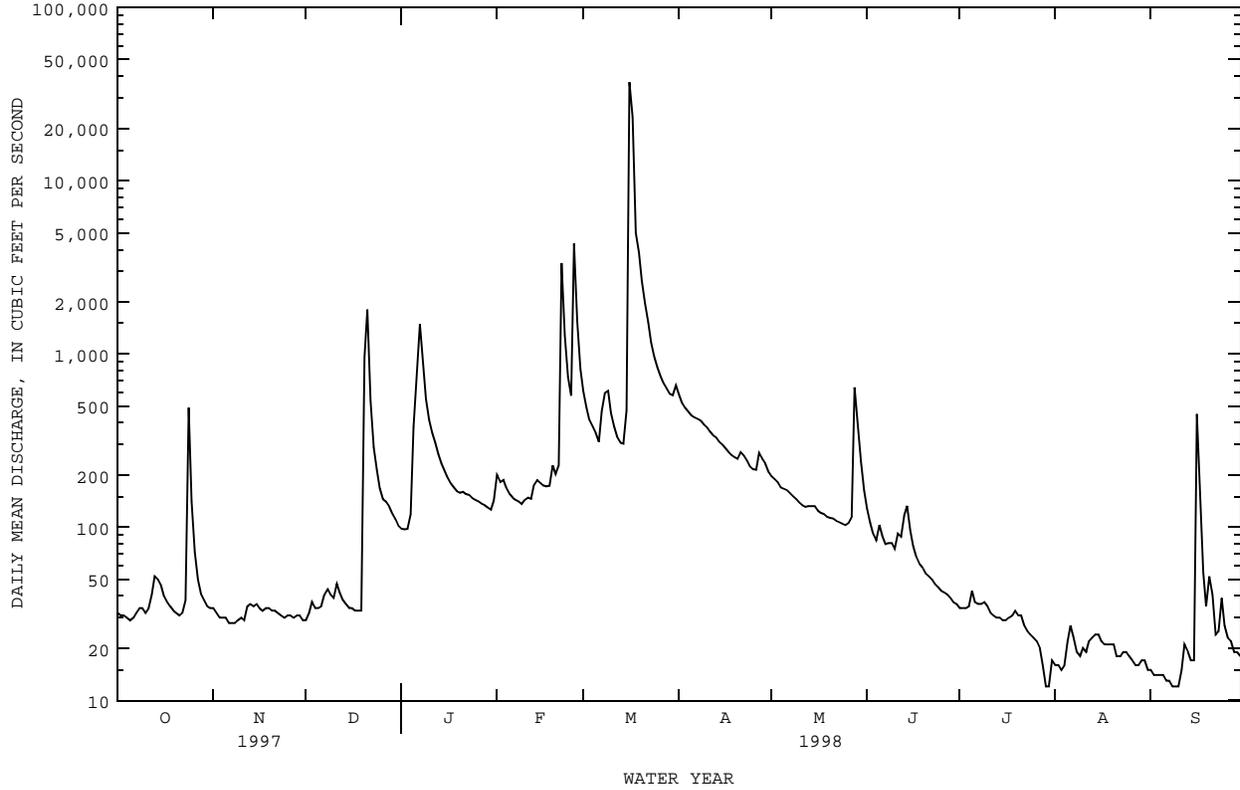
e Estimated
z Period of regulated streamflow.



08095200 NORTH BOSQUE RIVER AT VALLEY MILLS, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1968 - 1998z	
ANNUAL TOTAL	364129		141852			
ANNUAL MEAN	998		389		308	
HIGHEST ANNUAL MEAN					1664	1992
LOWEST ANNUAL MEAN					14.6	1984
HIGHEST DAILY MEAN	25500	Feb 21	37100	Mar 16	123000	Dec 21 1991
LOWEST DAILY MEAN	28	Sep 13	12	Jul 29	.00	Jun 1 1984
ANNUAL SEVEN-DAY MINIMUM	29	Nov 5	13	Sep 4	.00	Jun 17 1984
INSTANTANEOUS PEAK FLOW			92000	Mar 16	220000	Dec 21 1991
INSTANTANEOUS PEAK STAGE			39.40	Mar 16	44.60	Dec 21 1991
ANNUAL RUNOFF (AC-FT)	722200		281400		223400	
10 PERCENT EXCEEDS	2230		502		506	
50 PERCENT EXCEEDS	249		75		44	
90 PERCENT EXCEEDS	32		19		7.4	

z Period of regulated streamflow.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Oct 1997 to Sep 1998.

REMARKS.--Samples are collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
OCT 27...	1410	48	418	8.2	15.5	45	19	9.9	101	.8	180
JAN 13...	1510	259	482	8.2	10.5	27	20	11.0	100	1.4	220
FEB 11...	1035	150	565	7.7	11.0	13	4.4	10.7	99	1.5	250
MAR 25...	1205	829	504	7.5	18.5	21	26	9.4	102	2.1	220
JUN 29...	1225	38	519	7.3	30.0	15	7.0	9.0	122	1.1	210
AUG 18...	1405	22	465	7.3	29.0	18	5.0	10.7	142	.7	180

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT 27...	17	57	8.4	17	.6	3.2	160	23	20	.20	10
JAN 13...	38	75	7.3	17	.5	4.4	180	32	22	.25	9.8
FEB 11...	44	85	9.6	22	.6	2.3	210	41	25	.27	4.4
MAR 25...	32	75	8.4	18	.5	3.8	190	31	23	.26	8.8
JUN 29...	43	67	10	25	.7	2.9	170	29	25	.29	15
AUG 18...	--	58	7.2	24	.8	1.9	190	26	19	.25	13

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDEDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDEDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT 27...	238	25	4	21	1.13	.010	1.14	<.015	--	<.20	<.010
JAN 13...	280	28	5	23	.810	.013	.823	<.020	--	.28	.064
FEB 11...	318	7	6	1	--	<.010	.682	.024	.14	.17	<.010
MAR 25...	286	67	6	61	.656	.019	.675	.023	.30	.32	.073
JUN 29...	278	16	4	12	1.01	.025	1.03	.029	.22	.25	<.010
AUG 18...	268	9	<1	--	1.02	.022	1.04	.065	.16	.22	<.010

08095200 NORTH BOSQUE RIVER AT VALLEY MILLS, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 27...	.017	.05	4.5	--	--	--	--	--	--	--	--
JAN 13...	.074	.23	5.8	--	--	--	--	--	--	--	--
FEB 11...	.013	.04	2.8	<1	62	<1.0	<8.0	<14	<12	<10	<10
MAR 25...	.063	.19	5.5	1	63	<1.0	<8.0	<14	<12	<10	<10
JUN 29...	<.010	--	4.3	--	--	--	--	--	--	--	--
AUG 18...	.013	.04	3.3	2	56	<1.0	<8.0	<14	<12	<10	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 27...	--	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	<100	10	<4.0	<.1	<60	<40	<1	<4.0	445	<10	<20
MAR 25...	<100	6	<4.0	<.1	<60	<40	1	<4.0	347	<10	<20
JUN 29...	--	--	--	--	--	--	--	--	--	--	--
AUG 18...	<100	10	11	<.1	<60	<40	<1	<4.0	381	<10	<20

BRAZOS RIVER BASIN

08095300 MIDDLE BOSQUE RIVER NEAR MCGREGOR, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 31°30'34", long 97°21'55", McLennan County, Hydrologic Unit 12060203, at left downstream side of bridge on Farm Road 3047, 1,100 ft downstream from Pecan Creek, 5.0 mi upstream from mouth, and 5.2 mi northeast of McGregor.

DRAINAGE AREA.--182 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Aug 1959 to Sep 1985 (daily mean discharge). Oct 1985 to current year (peak discharges greater than base discharge).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 530.51 ft above sea level. Prior to Oct 27, 1959, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good. No known regulation or diversions.

AVERAGE DISCHARGE.--26 years (water years 1960-1985), 78.4 ft³/s (56,800 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,300 ft³/s Oct 31, 1974 (gage height, 24.62 ft); no flow at times in 1960-64, 1967, 1971, 1978-79, 1981-84, and 1994.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1889, which reached a stage of 28.5 ft. A flood in 1957 reached a stage of 28.2 ft; and floods in 1913 and 1942 or 1943 reached a stage of about 28 ft, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 20	2230	21,600	19.53	Mar 16	1045	10,700	12.73

08095300 MIDDLE BOSQUE RIVER NEAR MCGREGOR, TX--Continued
(Flood-hydrograph partial-record station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Oct 1997 to Sep 1998.

REMARKS.--Samples collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
OCT	27...	301	8.2	11.0	9	.27	8.6	79	.9	120	9
JAN	13...	464	7.7	12.0	6	3.0	11.0	103	.5	240	58
FEB	12...	446	7.6	10.5	13	2.3	10.2	93	.4	220	36
MAR	25...	383	7.8	22.2	7	.42	11.2	131	.6	180	21
JUN	29...	323	7.2	30.0	16	1.2	6.8	92	.7	120	3
AUG	17...	270	7.3	31.0	27	1.4	7.4	101	.7	88	6

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	
OCT	27...	43	2.5	15	.6	1.8	110	--	--	.13	5.7	--
JAN	13...	91	2.2	7.6	.2	1.8	180	20	8.4	.27	11	273
FEB	12...	83	2.2	8.5	.3	1.0	180	22	8.8	.31	5.7	259
MAR	25...	70	2.1	8.1	.3	.89	160	17	8.2	.30	4.7	222
JUN	29...	46	2.5	16	.6	1.6	120	20	15	.34	27	203
AUG	17...	32	2.0	18	.9	2.0	82	19	17	.34	29	170

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	RESIDUE VOLA- TILE, SUS- PENDE (MG/L) (00535)	RESIDUE FIXED NON FILTER- ABLE (MG/L) (00540)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
OCT	27...	<1	3	--	--	<.010	.059	<.015	--	.28	<.010	<.010
JAN	13...	1	2	.00	5.34	.012	5.35	<.020	--	.16	.010	.019
FEB	12...	2	<1	--	4.30	.013	4.31	<.020	--	.17	<.010	.014
MAR	25...	1	1	.00	2.54	.010	2.55	.022	.14	.17	.010	.013
JUN	29...	4	2	2	.165	.014	.179	.067	.55	.62	<.010	<.010
AUG	17...	2	1	1	--	<.010	<.050	.096	.75	.85	<.010	.016

BRAZOS RIVER BASIN

08095300 MIDDLE BOSQUE RIVER NEAR MCGREGOR, TX--Continued
(Flood-hydrograph partial-record station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 27...	--	3.2	--	--	--	--	--	--	--	--	--
JAN 13...	.06	2.5	--	--	--	--	--	--	--	--	--
FEB 12...	.04	2.2	<1	44	<1.0	<8.0	<14	<12	<10	<10	<100
MAR 25...	.04	1.6	1	40	<1.0	<8.0	<14	<12	<10	<10	<100
JUN 29...	--	6.7	--	--	--	--	--	--	--	--	--
AUG 17...	.05	8.9	8	48	<1.0	<8.0	<14	<12	<10	<10	<100

DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 27...	--	--	--	--	--	--	--	--	--	--
JAN 13...	--	--	--	--	--	--	--	--	--	--
FEB 12...	5	<4.0	<.1	<60	<40	<1	<4.0	204	<10	<20
MAR 25...	<4	<4.0	<.1	<60	<40	<1	<4.0	190	<10	<20
JUN 29...	--	--	--	--	--	--	--	--	--	--
AUG 17...	5	<4.0	<.1	<60	<40	<1	<4.0	163	<10	<20

08095400 HOG CREEK NEAR CRAWFORD, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 31°33'20", long 97°21'22", McLennan County, Hydrologic Unit 12060203, on downstream side of bridge on Farm Road 185, 5.6 mi east of Crawford, and 9.8 mi upstream from South Bosque River.

DRAINAGE AREA.--78.2 mi².

PERIOD OF RECORD.--Aug 1959 to Sep 1985 (daily mean discharge). Oct 1985 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WSP 1922: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 560.54 ft above sea level. Prior to Oct 27, 1959, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records fair. Since water year 1980, at least 10% of the contributing drainage area has been regulated by two floodwater-retarding structures with a detention capacity of 9,600 acre-ft. These structures control runoff from 42.0 mi² in the Hog Creek drainage basin.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1960-1979), 37.7 ft³/s (27,310 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1959-1979).--Maximum discharge, 15,400 ft³/s Oct 4, 1959 (gage height, 14.31 ft); no flow at times in 1959, 1963-64, 1971, and 1978-79.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1900, 17.5 ft Sep 26, 1936. Flood in Apr or May 1957 reached a stage of 15.7 ft, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 20	1915	4,830	7.99	No other peak greater than base discharge.			

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX

LOCATION.--Lat 31°34'46", long 97°11'51", McLennan County, Hydrologic Unit 12060203, in intake structure at Waco Dam on Bosque River, at northwest edge of city limits of Waco, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--1,652 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Feb 1965 to current year. Prior to Oct 1970, published as Waco Reservoir.
Water-quality records.--Chemical analyses: Oct 1969 to Sep 1982

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 24,618 ft long, including spillway. The lake was built for flood control and water conservation. From Oct 1, 1964, to Feb 26, 1965, the lake was operated as a detention basin only. On Feb 26, 1965, old Lake Waco was breached and deliberate impoundment began. The spillway is controlled by fourteen 40.0- by 35.0-foot tainter gates. The outlet works consists of three gate-controlled outlets, 6.7 by 20.0 ft, opening into a 20.0-foot-diameter concrete conduit and two 54-inch concrete pipes. Low-flow releases are made through two 54-inch butterfly valves. Flow into two wet wells is controlled by four 5.0- by 6.0-foot slide gates that are used to release water downstream for the city of Waco municipal water supply. Flow is affected at times by discharge from the flood-detention pools of 44 floodwater-retarding structures with a combined detention capacity of 76,460 acre-ft. These structures control runoff from 248 mi² in the Bosque River and Hog Creek drainage basins. An unknown amount of water was diverted for municipal and industrial uses. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	510.0
Design flood.....	505.0
Top of gates.....	500.0
Crest of spillway	465.0
Top of conservation pool	455.0
Lowest controlled outlet (invert).....	400.0

COOPERATION.--Record of contents furnished by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 521,100 acre-ft, Dec 24, 1991 (elevation, 488.48 ft); minimum since normal operating level was reached, 86,360 acre-ft, Oct 8, 1984 (elevation, 445.10 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 235,700 acre-ft, Mar 17 (elevation, 465.75 ft); minimum daily contents, 114,400 acre-ft, Sep 10 (elevation, 450.51 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135600	134900	135200	145300	153600	176200	146800	142400	138600	130300	122400	116900
2	135200	134800	135300	145600	154400	174800	146000	142000	138400	130100	122200	116700
3	135100	134800	135500	146000	155200	173800	145500	141600	138200	129900	122000	116400
4	134900	134700	135500	147100	155900	171500	145600	141100	138400	129900	121700	116100
5	134700	134500	135500	154500	156200	167000	145800	140700	139000	129800	121500	115900
6	134700	134500	135500	171500	155500	161800	146200	140300	139000	129600	121600	115600
7	134900	134300	135600	183000	155000	157100	146500	139900	138800	129400	121500	115400
8	135000	134300	135800	183100	154300	152600	146700	139400	138800	129100	121200	115100
9	135000	134300	136000	178800	153600	148200	146300	138800	138600	128900	121000	114800
10	135000	134300	136100	172800	154500	145500	145800	138100	138600	128700	120800	114400
11	135000	134100	136100	166500	152700	146200	145300	137500	138600	128400	120500	114800
12	135100	134300	136100	160100	150400	147300	145200	137100	138600	128000	120400	115500
13	135100	134300	136100	153700	149400	148600	145200	136900	138600	127800	120200	115300
14	135100	134500	136100	149100	149200	149900	145200	136900	138400	127600	120300	115300
15	135000	134500	136100	146700	149100	151700	145300	136900	138400	127400	120100	116900
16	135000	134500	136000	146300	149100	193600	145100	136900	138200	127200	120000	117800
17	135000	134500	136000	146300	148200	235700	144900	137100	138000	127000	119800	120500
18	134900	134500	136000	146200	147000	230000	144700	136900	137800	126800	119700	120700
19	134800	134500	136000	146000	146000	222100	144500	136900	137600	126600	119500	120700
20	134800	134500	141300	146200	145400	211600	144300	136900	137400	126200	119300	120700
21	134700	134500	182000	145800	148300	200500	144500	136900	137100	125900	119100	120600
22	134500	134500	176300	146000	158400	189000	144300	136900	136900	125600	119000	120500
23	134500	134500	168800	146800	162700	177800	144100	136700	136500	125300	118800	120600
24	134500	134500	163000	147500	165800	167600	143700	136700	136300	125000	118600	120500
25	134800	134500	157500	148300	169000	158100	143400	136600	136000	124700	118400	120400
26	135000	134500	152300	149100	179300	151000	143600	136700	135800	124400	118200	120300
27	135000	134500	149500	149700	180900	147800	143500	136900	135500	124200	117900	120300
28	135000	134900	148200	150400	178900	147500	143300	137800	135300	123800	117800	120100
29	134900	135100	146700	151000	---	147700	143000	138400	133800	123600	117600	120100
30	134900	135200	146200	151700	---	148000	142800	138600	131600	123200	117300	119900
31	134900	---	145800	152400	---	147800	---	138600	---	122800	117100	---
MAX	135600	135200	182000	183100	180900	235700	146800	142400	139000	130300	122400	120700
MIN	134500	134100	135200	145300	145400	145500	142800	136600	131600	122800	117100	114400
(+)	453.60	453.64	455.14	456.04	459.34	455.42	454.72	454.12	453.13	451.83	450.95	451.39
(@)	-600	+300	+10600	+6600	+26500	-31100	-5000	-4200	-7000	-8800	-5700	+2800
CAL YR 1997	MAX 279100	MIN 134100	(@) -600									
WTR YR 1998	MAX 235700	MIN 114400	(@) -15600									

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Oct 1969 to Sep 1982, Feb to Sep 1998.

REMARKS.--Samples collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

313430097113801 - WACO LAKE SITE AC

DATE	TIME	RESER- VOIR STORAGE (AC-FT) (00054)	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, OXYGEN, SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI KF AGAR PER (100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
FEB												
11...	1040	154000	1.00	332	8.3	11.5	.67	10.0	92	K15	K15	140
11...	1042	--	10.0	332	8.3	11.0	--	9.9	90	--	--	--
11...	1044	--	20.0	333	8.3	11.0	--	9.9	90	--	--	--
11...	1046	--	30.0	330	8.3	11.5	--	9.9	91	--	--	--
11...	1048	--	40.0	335	8.2	11.0	--	9.8	89	--	--	--
11...	1050	--	50.0	334	8.3	11.0	--	9.8	89	--	--	--
11...	1052	--	60.0	334	8.2	11.0	--	9.7	88	--	--	--
11...	1054	--	70.0	331	8.1	11.0	--	8.8	80	--	--	--
11...	1056	--	79.0	331	8.1	11.0	--	8.8	80	--	--	140
MAR												
26...	0950	154000	1.00	343	8.0	15.5	.80	8.1	82	E130	E88	150
26...	0952	--	10.0	342	8.0	15.5	--	8.1	82	--	--	--
26...	0954	--	20.0	341	8.0	15.5	--	8.0	81	--	--	--
26...	0956	--	30.0	335	8.0	15.0	--	8.1	81	--	--	--
26...	0958	--	40.0	335	7.9	15.0	--	7.9	79	--	--	--
26...	1000	--	50.0	335	7.9	14.0	--	7.5	73	--	--	--
26...	1002	--	60.0	334	7.8	14.0	--	7.1	69	--	--	--
26...	1004	--	70.0	340	7.6	13.5	--	5.1	49	--	--	150
AUG												
18...	0902	120000	1.00	326	8.0	29.0	.98	5.1	67	K1	K7	120
18...	0904	--	10.0	327	8.0	29.0	--	5.1	67	--	--	--
18...	0906	--	20.0	328	7.9	29.0	--	4.5	59	--	--	--
18...	0908	--	30.0	332	7.7	29.0	--	3.4	44	--	--	--
18...	0910	--	40.0	331	7.5	29.0	--	1.9	25	--	--	--
18...	0912	--	50.0	332	7.5	29.0	--	1.6	21	--	--	--
18...	0914	--	60.0	333	7.5	29.0	--	1.4	18	--	--	--
18...	0916	--	70.0	335	7.4	28.5	--	.7	9	--	--	--
18...	0918	--	84.0	561	7.2	19.5	--	.0	0	--	--	230

313430097113801 - WACO LAKE SITE AC

DATE	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB												
11...	35	49	4.1	11	.4	3.1	110	21	12	.21	9.5	180
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
11...	20	49	4.1	11	.4	3.1	120	27	13	.21	9.9	194
MAR												
26...	28	52	4.4	11	.4	3.4	120	18	12	.19	8.4	187
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	23	53	4.1	10	.4	3.1	130	19	11	.21	9.4	190
AUG												
18...	7	37	6.1	16	.6	3.6	110	23	17	.25	7.6	178
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	78	7.7	13	.4	4.0	290	.41	13	.24	12	312

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

313430097113801 - WACO LAKE SITE AC

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB											
11...	1.45	.032	1.49	.054	.19	.25	.023	.027	.08	<10	<4.0
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
11...	1.33	.034	1.36	.138	.24	.38	.019	.040	.12	<10	8.2
MAR											
26...	.850	.057	.907	.135	.41	.54	.055	.048	.15	<10	<4.0
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
26...	.960	.070	1.03	.152	.34	.50	.039	.035	.11	<10	5.3
26...	.936	.072	1.01	.348	.34	.68	.037	.036	.11	<10	87
AUG											
18...	--	<.010	<.050	.086	.54	.63	<.010	.016	.05	<10	<4.0
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	<.010	<.050	.065	.22	.28	<.010	.015	.05	<10	5.6
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	<.010	.080	.221	.20	.42	<.010	.019	.06	<10	191
18...	--	<.010	<.050	<.020	--	5.8	.064	.066	.20	540	10200

313511097122801 - WACO LAKE SITE AL

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB							
11...	1120	1.00	333	8.3	11.0	10.1	92
11...	1122	10.0	333	8.3	11.0	10.1	92
11...	1124	20.0	334	8.3	11.0	10.1	92
11...	1126	31.0	332	8.3	11.0	10.1	92
MAR							
26...	1040	1.00	342	8.0	15.5	8.0	81
26...	1042	10.0	342	8.0	15.5	8.2	83
26...	1044	20.0	342	8.0	15.5	8.2	83
26...	1046	25.0	342	8.0	15.5	8.2	83
AUG							
18...	0955	1.00	327	8.0	29.0	5.4	71
18...	0957	10.0	327	8.0	29.0	5.2	68
18...	0959	20.0	330	8.0	29.0	5.0	65
18...	1001	31.0	335	7.5	29.0	1.3	17

08095550 WACO LAKE NEAR WACO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

313338097130301 - WACO LAKE SITE BC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)
FEB							
11...	1305	1.00	337	8.3	11.5	9.8	90
11...	1307	10.0	338	8.3	11.5	10.1	93
11...	1309	20.0	336	8.3	11.5	10.1	93
11...	1311	33.0	336	8.3	11.5	10.0	92
MAR							
26...	1255	1.00	342	8.0	15.5	8.1	82
26...	1257	10.0	342	8.0	15.5	8.1	82
26...	1259	20.0	342	8.0	15.5	8.1	82
26...	1301	30.0	341	8.0	15.5	8.1	82
AUG							
18...	1150	1.00	329	8.0	29.5	5.2	69
18...	1152	10.0	328	7.9	29.0	4.8	63
18...	1154	20.0	330	7.8	29.0	4.2	55
18...	1156	27.0	330	7.7	29.0	3.8	50

313148097140601 - WACO LAKE SITE CC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	STREP-TOCOCCHI, KF AGAR (COLS./100 ML) (31673)	HARD-NESS (MG/L CACO3) (00900)	HARD-NESS (MG/L FLD. AS CACO3) (00904)
FEB												
11...	1325	1.00	376	8.4	12.0	.58	9.9	93	43	32	160	16
11...	1327	10.0	385	8.4	12.0	--	9.8	92	--	--	--	--
11...	1329	20.0	342	8.3	12.0	--	9.7	91	--	--	170	20
MAR												
26...	1315	1.00	390	8.1	17.0	.80	8.0	84	E220	E110	180	32
26...	1317	10.0	388	8.0	16.5	--	8.0	83	--	--	--	--
26...	1318	20.0	372	8.0	16.0	--	8.0	82	--	--	170	28
AUG												
18...	1206	1.00	330	7.8	29.0	.73	4.5	59	K0	K20	120	9
18...	1208	10.0	332	7.6	29.0	--	3.2	42	--	--	--	--
18...	1210	20.0	334	7.5	29.0	--	2.1	28	--	--	120	7

313148097140601 - WACO LAKE SITE CC

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS-FIX END CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
FEB											
11...	60	3.5	12	.4	2.6	150	23	12	.22	8.1	221
11...	--	--	--	--	--	--	--	--	--	--	--
11...	62	3.4	12	.4	2.4	150	24	11	.23	7.5	225
MAR											
26...	67	3.1	10	.3	2.4	150	20	10	.24	8.8	220
26...	--	--	--	--	--	--	--	--	--	--	--
26...	62	3.4	10	.3	2.7	140	20	11	.21	9.1	211
AUG											
18...	37	5.9	16	.6	3.7	110	23	17	.25	8.1	176
18...	--	--	--	--	--	--	--	--	--	--	--
18...	39	5.9	16	.6	3.7	110	22	18	.26	8.7	182

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

313148097140601 - WACO LAKE SITE CC

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB											
11...	2.62	.031	2.65	<.020	--	.22	<.010	.015	.05	<10	<4.0
11...	--	--	--	--	--	--	--	--	--	--	--
11...	2.72	.032	2.76	<.020	--	.23	<.010	.013	.04	<10	<4.0
MAR											
26...	1.93	.059	1.99	.066	.35	.42	.023	.021	.06	<10	5.9
26...	--	--	--	--	--	--	--	--	--	--	--
26...	1.78	.062	1.85	.071	.29	.36	.024	.024	.07	<10	<4.0
AUG											
18...	--	.012	<.050	.051	.20	.25	<.010	.013	.04	<10	<4.0
18...	--	.011	<.050	.072	.22	.29	<.010	.012	.04	<10	22
18...	--	.011	<.050	.163	.22	.38	<.010	.016	.05	<10	246

313534097142401 - WACO LAKE SITE DC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, SATUR- ATION (MG/L) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
FEB										
11...	1145	1.00	346	8.3	11.5	--	10.1	93	1.17	.028
11...	1147	10.0	345	8.3	11.5	--	10.1	93	--	--
11...	1149	20.0	341	8.3	11.5	--	10.1	93	--	--
11...	1151	30.0	338	8.3	11.5	--	10.1	93	--	--
11...	1153	38.0	332	8.3	11.5	--	10.0	92	1.38	.032
MAR										
26...	1100	1.00	414	8.0	17.0	.80	7.9	82	.506	.031
26...	1102	10.0	414	8.0	17.0	--	7.9	82	--	--
26...	1104	20.0	416	8.0	17.0	--	7.8	81	--	--
26...	1106	30.0	402	8.0	16.5	--	7.6	78	--	--
26...	1108	35.0	387	7.9	16.5	--	7.4	76	.598	.042
AUG										
18...	1000	1.00	322	8.2	30.0	.76	6.2	83	--	<.010
18...	1002	10.0	320	8.2	30.0	--	5.9	79	--	--
18...	1004	20.0	340	7.5	29.5	--	1.3	17	--	--
18...	1006	32.0	369	7.3	29.0	--	.0	0	--	<.010

313534097142401 - WACO LAKE SITE DC

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB									
11...	1.20	.036	.24	.27	<.010	.028	.09	<10	<4.0
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
11...	1.41	.046	.23	.28	.020	.028	.09	<10	<4.0
MAR									
26...	.537	.112	.38	.49	.091	.081	.25	<10	<4.0
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
26...	.640	.168	.39	.56	.069	.068	.21	<10	17
AUG									
18...	<.050	.054	.21	.27	<.010	.015	.05	<10	13
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	<.050	.383	.23	.62	.029	.047	.14	530	455

08095550 WACO LAKE NEAR WACO, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

313608097164501 - WACO LAKE SITE EC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, OXYGEN, SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3 (MG/L) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB												
11...	1226	1.00	517	8.1	13.5	.49	9.6	93	92	100	220	30
11...	1228	10.0	519	8.0	12.0	--	9.5	89	--	--	--	--
11...	1230	21.0	522	8.0	12.0	--	9.2	86	--	--	220	21
MAR												
26...	1200	1.00	527	8.0	19.5	1.00	7.0	77	E36	E250	230	32
26...	1202	10.0	527	7.9	19.5	--	6.9	76	--	--	--	--
26...	1204	20.0	527	7.9	19.0	--	7.1	77	--	--	230	29
AUG												
18...	1052	1.00	400	7.8	30.0	.37	5.3	71	K8	K72	140	--
18...	1054	10.0	400	7.8	30.0	--	5.1	68	--	--	--	--
18...	1056	18.0	401	7.8	30.0	--	4.6	61	--	--	140	--

313608097164501 - WACO LAKE SITE EC

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB											
11...	74	8.5	20	.6	2.4	190	37	22	.26	3.0	284
11...	--	--	--	--	--	--	--	--	--	--	--
11...	76	8.4	20	.6	2.5	200	36	23	.26	3.4	293
MAR											
26...	80	8.1	17	.5	3.6	200	31	21	.26	9.6	294
26...	--	--	--	--	--	--	--	--	--	--	--
26...	80	8.0	17	.5	3.6	200	31	21	.25	9.7	296
AUG											
18...	41	8.2	25	.9	2.7	140	25	21	.29	17	224
18...	--	--	--	--	--	--	--	--	--	--	--
18...	41	8.1	25	.9	2.7	140	26	21	.28	17	225

313608097164501 - WACO LAKE SITE EC

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB											
11...	--	<.010	.463	.036	.15	.19	<.010	.013	.04	<10	<4.0
11...	--	--	--	--	--	--	--	--	--	--	--
11...	--	<.010	.425	.112	.12	.23	<.010	.014	.04	<10	20
MAR											
26...	.629	.019	.648	.026	.24	.26	.052	.048	.15	<10	9.4
26...	--	--	--	--	--	--	--	--	--	--	--
26...	.632	.017	.649	.028	.25	.28	.050	.047	.14	<10	15
AUG											
18...	--	<.010	<.050	.167	.19	.35	<.010	.015	.05	<10	9.5
18...	--	--	--	--	--	--	--	--	--	--	--
18...	--	<.010	<.050	.161	.22	.39	<.010	.012	.04	<10	16

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX--Continued

Waco Lake Site AC (313430097113801)

Phytoplankton Analyses October 1997 to September 1998

	Date	2-11-98
	Time	1040
	TOTAL CELLS/mL	8,397
	NUMBER OF SPECIES	9
	DEPTH COLLECTED (ft.)	1.1
Organisms		Cells/mL
BACILLARIOPHYTA		
Order Centrales		
<i>Cyclotella ocellata</i>		90
Order Pennales		
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>		180
CHLOROPHYTA		
<i>Ankistrodesmus falcatus</i>		120
<i>Chlamydomonas</i> sp.		510
<i>Micractinium pusillum</i> .		30
<i>Scenedesmus bijuga</i>		60
CYANOPHYTA		
<i>Aphanizomenon flos-aquae</i>		1,799
<i>Aphanocapsa delicatissima</i>		5,398
EUGLENOPHYTA		
<i>Trachelomonas</i> sp.		210

Waco Lake Site CC (313148097140601)

Phytoplankton Analyses October 1997 to September 1998

	Date	2-11-98
	Time	1325
	TOTAL CELLS/mL	4,499
	NUMBER OF SPECIES	7
	DEPTH COLLECTED (ft.)	0.95
Organisms		Cells/mL
BACILLARIOPHYTA		
Order Pennales		
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>		420
CHLOROPHYTA		
<i>Chlamydomonas</i> sp.		240
<i>Micractinium pusillum</i> .		60
<i>Selenastrum Westii</i>		30
<i>Staurastrum</i> sp.		60
CYANOPHYTA		
<i>Aphanocapsa delicatissima</i>		3,599
EUGLENOPHYTA		
<i>Trachelomonas</i> sp.		90

08095550 WACO LAKE NEAR WACO, TX--Continued

Waco Lake Site EC (313608097164501)

Phytoplankton Analyses October 1997 to September 1998

	Date	2-11-98
	Time	1226
	TOTAL CELLS/mL	7,529
	NUMBER OF SPECIES	9
	DEPTH COLLECTED (ft.)	0.8
Organisms		Cells/mL
BACILLARIOPHYTA		
Order Centrales		
<i>Cyclotella ocellata</i>		1,380
Order Pennales		
<i>Navicula</i> sp.		240
<i>Pinnularia brevicostata</i> var <i>brevicostata</i>		240
CHLOROPHYTA		
<i>Ankistrodesmus falcatus</i>		120
<i>Chlamydomonas</i> sp.		390
<i>Micractinium pusillum</i> .		60
CYANOPHYTA		
<i>Aphanizomenon flos-aquae</i>		600
<i>Aphanocapsa delicatissima</i>		4,199
EUGLENOPHYTA		
<i>Trachelomonas</i> sp.		300

Waco Lake Site AC (313430097113801)

Phytoplankton Analyses October 1997 to September 1998

	Date	3-26-98
	Time	950
	TOTAL CELLS/mL	9,388
	NUMBER OF SPECIES	10
	DEPTH COLLECTED (ft.)	0.40
Organisms		Cells/mL
BACILLARIOPHYTA		
Order Centrales		
<i>Cyclotella ocellata</i>		24
<i>Stephanodiscus astraea</i>		156
Order Pennales		
<i>Nitzschia palea</i> var. <i>palea</i>		45
<i>Pinnularia brevicostata</i> var <i>brevicostata</i>		45
CHLOROPHYTA		
<i>Ankistrodesmus falcatus</i>		30
<i>Chlamydomonas</i> sp.		360
<i>Selenastrum Westii</i>		30
CYANOPHYTA		
<i>Aphanizomenon flos-aquae</i>		4,199
<i>Aphanocapsa delicatissima</i>		4,199
EUGLENOPHYTA		
<i>Trachelomonas</i> sp.		300

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX--Continued

Waco Lake Site CC (313148097140601)

Phytoplankton Analyses October 1997 to September 1998

Date	3-26-98
Time	1315
<hr/>	
TOTAL CELLS/mL	4,169
NUMBER OF SPECIES	7
DEPTH COLLECTED (ft.)	0.40

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	45
<i>Stephanodiscus astraea</i>	45
Order Pennales	
<i>Navicula</i> sp.	90
<i>Pinnularia brevicostata</i> var <i>brevicostata</i>	90
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	3,599
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	210
CRYPTOPHYTA	
<i>Cryptomonas erosa</i>	90

Waco Lake Site EC (313608097164501)

Phytoplankton Analyses October 1997 to September 1998

Date	3-26-98
Time	1200
<hr/>	
TOTAL CELLS/mL	9,598
NUMBER OF SPECIES	18
DEPTH COLLECTED (ft.)	0.50

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	102
<i>Stephanodiscus astraea</i>	408
Order Pennales	
<i>Cocconeis placentula</i> var. <i>placentula</i>	80
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>	80
<i>Pinnularia parvula</i> var <i>parvula</i>	80
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	210
<i>Chlamydomonas</i> sp.	150
<i>Elakatothrix gelatinosa</i>	30
<i>Micractinium pusillum</i>	90
<i>Mougeotia</i> sp.	120
<i>Oocystis pusilla</i>	30
<i>Scenedesmus acuminatus</i>	30
<i>Scenedesmus opoliensis</i>	120
CYANOPHYTA	
<i>Aphanizomenon flos-aquae</i>	5,398
<i>Aphanocapsa delicatissima</i>	1,200
<i>Aphanocapsa delicatissima</i>	600
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	780
CRYPTOPHYTA	
<i>Cryptomonas erosa</i>	90

08095550 WACO LAKE NEAR WACO, TX--Continued

Waco Lake Site AC (313430097113801)

Phytoplankton Analyses October 1997 to September 1998

Date	8-18-98
Time	902
TOTAL CELLS/mL	38,448
NUMBER OF SPECIES	14
DEPTH COLLECTED (ft.)	1.6

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>	510
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	240
<i>Chlamydomonas</i> sp.	90
<i>Cosmarium</i> sp.	30
<i>Crucigenia tetrapedia</i>	30
<i>Pediastrum duplex</i>	30
<i>Scenedesmus acuminatus</i>	30
<i>Scenedesmus opoliensis</i>	120
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	20,393
<i>Aphanocapsa elachista</i>	1,200
<i>Chroococcus limneticus</i>	360
<i>Merismopedia tenuissima</i>	6,238
<i>Oscillatoria</i> sp.	8,997
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	180

Waco Lake Site CC (313148097140601)

Phytoplankton Analyses October 1997 to September 1998

Date	8-18-98
Time	1206
TOTAL CELLS/mL	32,450
NUMBER OF SPECIES	13
DEPTH COLLECTED (ft.)	1.2

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Melosira varians</i>	60
Order Pennales	
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>	270
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	120
<i>Cosmarium</i> sp.	60
<i>Crucigenia tetrapedia</i>	60
<i>Micractinium pusillum</i>	30
<i>Scenedesmus acuminatus</i>	30
CYANOPHYTA	
<i>Anabaena spiroides</i>	900
<i>Aphanocapsa delicatissima</i>	6,598
<i>Aphanocapsa elachista</i>	1,200
<i>Merismopedia tenuissima</i>	10,556
<i>Oscillatoria</i> sp.	11,996
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	570

BRAZOS RIVER BASIN

08095550 WACO LAKE NEAR WACO, TX--Continued

Waco Lake Site EC (313608097164501)

Phytoplankton Analyses October 1997 to September 1998

Date	8-18-98
Time	1052

TOTAL CELLS/mL	26,213
NUMBER OF SPECIES	13
DEPTH COLLECTED (ft.)	0.6

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
<i>Amphora ovalis</i> var. <i>ovalis</i>	45
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>	135
<i>Pinnularia</i> sp.	90
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	60
<i>Chlamydomas</i> sp.	30
<i>Cosmarium</i> sp.	30
<i>Scenedesmus opoliensis</i>	30
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	13,196
<i>Aphanocapsa elachista</i>	1,200
<i>Chroococcus limneticus</i>	120
<i>Merismopedia tenuissima</i>	3,839
<i>Oscillatoria</i> sp.	7,198
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	240

08095600 BOSQUE RIVER NEAR WACO, TX

LOCATION.--Lat 31°36'04", long 97°11'36", McLennan County, Hydrologic Unit 12060203, on downstream side of bridge on Farm Road 1637, 1.8 mi downstream from Waco Lake Dam, 2.8 mi upstream from mouth, and 4.7 mi northwest of courthouse in Waco.

DRAINAGE AREA.--1,656 mi².

PERIOD OF RECORD.--Chemical and biochemical analyses: Feb 1998 to Sep 1998.

REMARKS.--Samples collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN DEMAND, (PER-CENT SATUR-ATION) (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	
FEB 11...	1415	1860	341	7.7	11.5	21	14	11.7	109	1.1	150
MAR 26...	1230	4840	332	8.0	16.0	41	25	11.8	121	1.6	150
AUG 18...	1030	--	401	7.0	29.0	22	2.5	8.4	111	.9	140
DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L SIO2) (00955)
FEB 11...	28	53	4.3	12	.4	3.0	120	21	12	.21	9.5
MAR 26...	15	51	4.4	11	.4	3.5	130	18	13	.19	7.8
AUG 18...	26	47	6.1	21	.8	3.5	120	33	25	.27	8.1
DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
FEB 11...	196	12	2	10	1.40	.028	1.43	.060	.22	.28	.020
MAR 26...	191	19	6	13	.781	.057	.838	.137	.40	.53	.054
AUG 18...	214	6	4	2	--	<.010	<.050	.052	.29	.34	<.010
DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
FEB 11...	.028	.09	4.9	2	38	<1.0	<8.0	<14	<12	<10	<10
MAR 26...	.052	.16	5.2	2	43	<1.0	<8.0	<14	<12	<10	<10
AUG 18...	.015	.05	5.0	4	56	<1.0	<8.0	<14	<12	<10	<10
DATE	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
FEB 11...	<100	6	<4.0	<.1	<60	<40	<1	<4.0	221	<10	<20
MAR 26...	<100	<4	<4.0	<.1	<60	<40	<1	<4.0	206	<10	<20
AUG 18...	<100	7	<4.0	<.1	<60	<40	<1	<4.0	358	<10	<20

BRAZOS RIVER BASIN

08096500 BRAZOS RIVER AT WACO, TX

LOCATION.--Lat 31°32'09", long 97°04'23", McLennan County, Hydrologic Unit 12060202, on left bank 2.2 mi downstream from bridge on LaSalle Avenue and at mile 400.7.

DRAINAGE AREA.--29,573 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Sep 1898 to current year (Jan 1912 to Sep 1914 monthly records only, published in WSP 1312).

REVISED RECORDS.--WSP 850 and 878: 1899-1900, 1907-9 (monthly and yearly summaries only). WSP 1512: 1901-5, 1910, 1915, 1925-26(M), 1927-29. WSP 1922: 1957. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 349.34 ft above sea level. Sep 14, 1898 to Mar 28, 1918, May 6, 1922 to Feb 12, 1925, nonrecording gage, and Mar 28, 1918 to May 5, 1922, Feb 13, 1925 to Aug 14, 1969, water-stage recorder. Prior to Aug 14, 1969, at site 3.9 mi upstream at datum 7.46 ft higher. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since water year 1941, at least 10% of contributing drainage area has been regulated by Possum Kingdom Lake (station 08088500, capacity, 724,700 acre-ft). Additional regulation by Lake Whitney (station 08092500) and by Waco Lake (station 08095550). The combined capacity for 18 reservoirs above station is 4,135,000 acre-ft, of which 2,194,000 acre-ft is flood-control storage in Lake Whitney and in Waco Lake. The City of Waco diverts water above station for municipal use, and the Brazos River Authority returns treated wastewater effluent to the river above station. There are many other small diversions above station for municipal supply, irrigation, and for oil field operations that will not appreciably affect flow. Flow is affected at times by discharge from the flood-detention pools of eleven floodwater-retarding structures with a combined detention capacity of 6,420 acre-ft. These structures control runoff from 20.4 mi² in the Aquilla and Hackberry Creeks drainage basins. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--42 years (water years 1899-1940), 2,560 ft³/s (1,855,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS 1899-1940).--Maximum discharge since 1847, 246,000 ft³/s Sep 27, 1936 (gage height, 40.90 ft), at former site and datum, levee on left bank was overtopped and broken by flood; no flow Aug 20, 21, 1918, and probably for several days in Aug 1923.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage for 1847-98, 34.63 ft May 28, 1885, from floodmark at site 3.9 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	667	832	4.1	1700	275	7360	3420	1130	2980	1990	412	718
2	976	191	229	3420	261	6840	3700	1040	1330	1570	962	485
3	922	752	345	1780	455	3730	3410	1360	1020	1430	1390	853
4	152	595	621	1430	613	4200	3600	1050	827	275	1930	1640
5	79	481	355	3370	817	5000	3620	1400	727	81	238	1320
6	103	504	72	11900	1600	5670	1860	1610	270	71	301	899
7	339	1130	139	16300	2190	5340	1500	1570	157	1000	74	170
8	453	675	2230	9110	1390	5090	2660	1180	368	1300	1060	63
9	385	418	2050	6510	1040	6100	1590	879	763	1280	187	468
10	348	556	789	7670	1290	4420	2180	809	1520	1000	706	408
11	290	1460	788	7840	2220	2070	2270	1320	698	1250	1070	47
12	759	771	1390	7900	2620	1040	1310	1200	239	1190	203	104
13	210	494	767	6700	1950	1660	1080	964	761	1700	708	92
14	423	443	1560	6460	1400	964	2320	809	991	686	196	62
15	613	151	1630	5190	1410	579	1820	778	1000	646	75	1150
16	560	2960	1220	3600	1240	4260	2330	755	926	1230	907	1450
17	546	1320	563	2280	1550	26000	915	769	1020	967	858	960
18	248	895	776	1760	1840	32300	1070	761	1370	198	1110	124
19	890	935	514	1290	2020	33900	914	753	1300	294	231	337
20	500	903	2790	1370	1500	33800	1660	758	1470	863	816	640
21	1520	365	27800	1520	1590	32500	1680	752	1360	903	1220	1210
22	1110	375	9290	1610	4850	31900	940	742	920	952	170	953
23	704	451	7520	892	2250	24300	1340	700	1070	1020	68	1300
24	1000	470	6350	1650	1470	12500	2350	702	663	930	51	1430
25	647	333	6310	2370	1240	11500	1500	749	466	570	446	232
26	786	7.5	5610	1740	1470	10500	1120	676	618	1490	1060	80
27	1480	5.6	5410	860	3600	8210	847	1290	877	212	1560	74
28	921	102	3750	1150	7710	4850	956	626	1120	674	798	694
29	835	13	4680	684	---	3780	939	1620	776	849	780	1120
30	620	3.7	3430	443	---	4390	1150	1350	451	1100	772	739
31	613	---	1180	340	---	4230	---	1180	---	737	775	---
TOTAL	19699	18591.8	100162.1	120839	51861	338983	56051	31282	28058	28458	21134	19822
MEAN	635	620	3231	3898	1852	10930	1868	1009	935	918	682	661
MAX	1520	2960	27800	16300	7710	33900	3700	1620	2980	1990	1930	1640
MIN	79	3.7	4.1	340	261	579	847	626	157	71	51	47
AC-FT	39070	36880	198700	239700	102900	672400	111200	62050	55650	56450	41920	39320

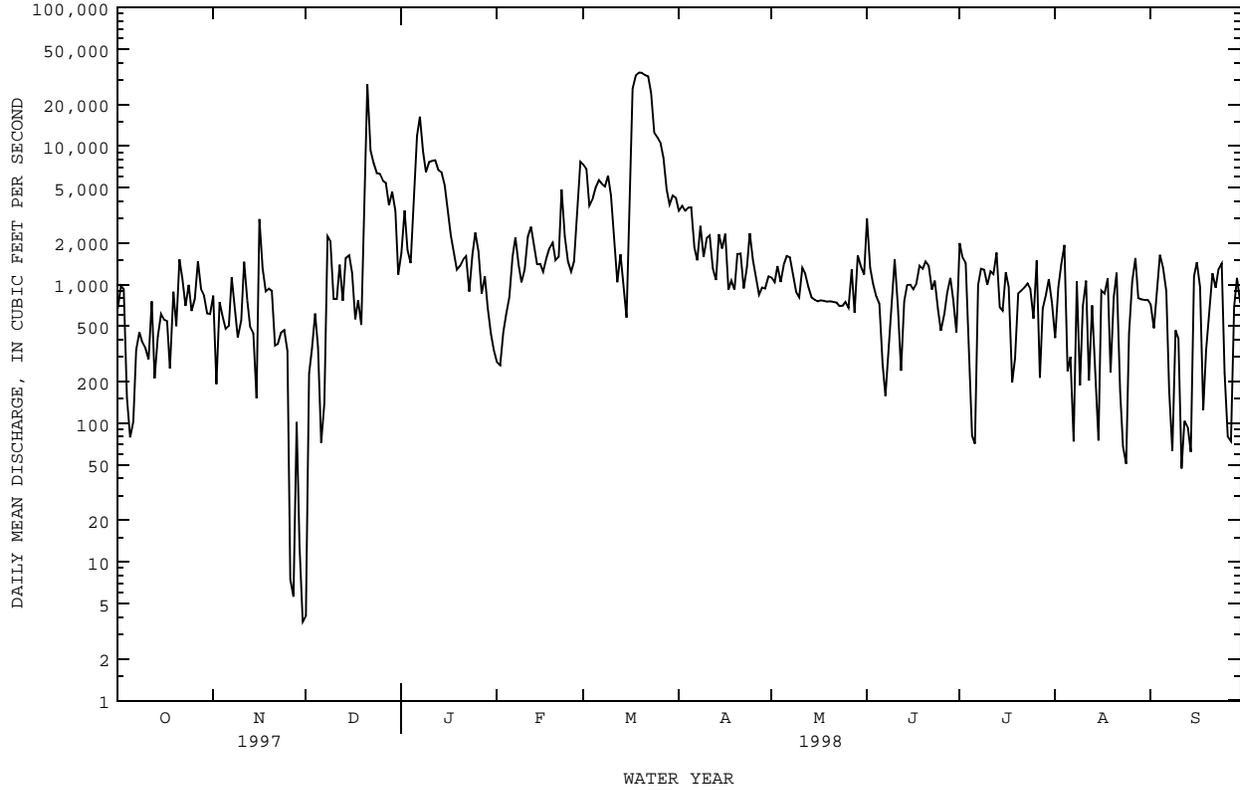
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998z, BY WATER YEAR (WY)

	1978	1471	1545	1903	2179	2616	2913	5568	4407	1709	1104	1255
MEAN	1978	1471	1545	1903	2179	2616	2913	5568	4407	1709	1104	1255
MAX	13540	11150	15070	28140	16860	20260	22470	36340	37140	9427	7300	9492
(WY)	1960	1975	1992	1992	1992	1992	1942	1957	1957	1982	1995	1966
MIN	46.6	55.8	40.8	44.6	28.0	77.3	160	43.5	263	49.2	98.3	97.5
(WY)	1984	1984	1955	1955	1984	1971	1955	1988	1996	1978	1988	1983

08096500 BRAZOS RIVER AT WACO, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998z	
ANNUAL TOTAL	1904315.9		834940.9			
ANNUAL MEAN	5217		2288		2387	
HIGHEST ANNUAL MEAN					9611 1992	
LOWEST ANNUAL MEAN					322 1984	
HIGHEST DAILY MEAN	34900	Mar 10	33900	Mar 19	121000	Apr 22 1945
LOWEST DAILY MEAN	3.7	Nov 30	3.7	Nov 30	.12	Aug 7 1988
ANNUAL SEVEN-DAY MINIMUM	52	Nov 26	52	Nov 26	4.4	May 13 1988
INSTANTANEOUS PEAK FLOW			36100	Mar 19	144000	Apr 22 1945
INSTANTANEOUS PEAK STAGE			22.47	Mar 19	36.70	Apr 22 1945
ANNUAL RUNOFF (AC-FT)	3777000		1656000		1730000	
10 PERCENT EXCEEDS	14800		4910		4930	
50 PERCENT EXCEEDS	2210		1000		850	
90 PERCENT EXCEEDS	371		222		142	

z Period of regulated streamflow.



08099100 LEON RIVER NEAR DE LEON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 32°10'25", long 98°31'58", Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on State Highway 16, 1.5 mi upstream from Flat Creek, 4.4 mi northeast of De Leon, 6 mi downstream from Hog Creek, and 250.1 mi upstream from mouth.

DRAINAGE AREA.--479 mi².

PERIOD OF RECORD.--Sep 1960 to Sep 1986 (daily mean discharge). Oct 1986 to Sep 1995 (daily discharges greater than 600 ft³/s). Oct 1995 to current year (peak discharges greater than base discharge).

Water-quality records.--Chemical and biochemical analyses: May 1981 to Jul 1982, Nov 1990 to Aug 1997.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,209.93 ft above sea level. Prior to Nov 22, 1960, nonrecording gage at same site and datum. Satellite telemeter at station.

REMARKS.--Records good except for Oct 8 to Dec 2, which are fair. Since installation of gage in Sep 1960, at least 10% of contributing drainage area has been regulated by Leon Reservoir (capacity 40,200 acre-ft), about 17.5 mi upstream. There are numerous diversions above station for municipal, steam powerplant operation, and other uses.

AVERAGE DISCHARGE.--26 years (water years 1961-86), 41.1 ft³/s (29,760 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s Apr 26, 1990 (gage height, 19.00 ft, from floodmarks), from rating curve extended above 17,600 ft³/s; prior to Apr 26, 1990, maximum discharge, 7,540 ft³/s Jun 21, 1968, (gage height, 15.50 ft); no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.3 ft occurred in May 1908 at a point 2,000 ft downstream from present gage site and is the highest since that time, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 17	0100	6,390	a14.79	No other peak greater than base discharge.			

a From floodmark.

BRAZOS RIVER BASIN

08099300 SABANA RIVER NEAR DE LEON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 32°06'50", long 98°36'19", Comanche County, Hydrologic Unit 12070201, on left bank at downstream end of bridge on Farm Road 587, 0.6 mi downstream from Spring Branch, 4.0 mi west of De Leon, 4.2 mi upstream from Turkey Creek, and 12.2 mi upstream from mouth.

DRAINAGE AREA.--264 mi².

PERIOD OF RECORD.--Sep 1960 to Sep 1986 (daily mean discharge). Oct 1986 to Sep 1995 (daily discharges greater than 250 ft³/s). Oct 1995 to current year (peak discharges greater than base discharge).
Water-quality records.--Chemical and biochemical analyses: Nov 1990 to Aug 1997.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,209.59 ft above sea level (levels by Texas Department of Transportation). Prior to Nov 22, 1960, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--Records good except for Mar 15-17, Jun 3-19, which are fair. No known regulation or diversions. Flow may be slightly affected by Nabors Lake 0.4 mi upstream on Spring Branch.

AVERAGE DISCHARGE.--26 years (water years 1961-86), 28.9 ft³/s (20,950 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,500 ft³/s Apr 26, 1990 (gage height, 23.65 ft), from floodmark, from rating curve extended above 17,000 ft³/s; prior to Apr 26, 1990, maximum discharge, 10,400 ft³/s Jun 5, 1986, (gage height, 21.99 ft); no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1890, 24 ft in May 1908, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 16	1745	7,810	a21.17	May 27	0900	1,720	15.15

a From floodmark.

08099400 PROCTOR LAKE NEAR PROCTOR, TX

LOCATION.--Lat 31°58'07", long 98°29'09", Comanche County, Hydrologic Unit 12070201, in intake structure at Proctor Lake on Leon River, 2.0 mi upstream from U.S. Highways 67 and 377, 3.5 mi west of Proctor, and 228.1 mi upstream from mouth.

DRAINAGE AREA.--1,259 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Jan 1963 to current year. Prior to Oct 1970, published as Proctor Reservoir.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to May 28, 1963, non-recording gage at same site and datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a reinforced concrete gated structure and rolled earthfill dam, total length 13,460 ft. The lake was operated as a detention basin from Jan 30 to Jul 5, 1963. The gates were closed Jul 6, 1963, but the lake was operated as a detention basin to elevation 1,156.0 ft until construction was completed. Deliberate impoundment began Sep 30, 1963. The spillway is a gated concrete gravity structure located on the left bank, with an ogee weir section and basin. The spillway is controlled by eleven 40.0- by 35.0-foot tainter gates. The spillway was designed to discharge 431,800 ft³/s at an elevation of 1,201.0 ft. The lake is operated for flood control and water conservation. Inflow is partly regulated by one major reservoir (see station 08099000). Inflow is also affected at times by discharge from the flood-detention pools of 23 floodwater-retarding structures with a combined detention capacity of 43,690 acre-ft. These structures control runoff from 172 mi² in the Leon River and Rush Creek drainage basins. Borrow is not included in capacity totals. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	1,206.0
Design flood.....	1,201.0
Top of gates.....	1,197.0
Crest of spillway (top of conservation pool).....	1,162.0
Lowest gated outlet (invert).....	1,128.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 383,100 acre-ft, May 2, 1990 (elevation, 1,197.63 ft); minimum since first filling of lake, 18,900 acre-ft, Oct 4, 1984 (elevation, 1,149.37 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 110,800 acre-ft, Mar 20 (elevation, 1,171.65 ft); minimum daily contents, 36,340 acre-ft, Sep 30 (elevation, 1,157.25 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48420	46870	46450	48800	51770	55640	97400	58300	57690	52560	46330	40330
2	48210	46740	46700	48840	51900	55730	95570	58160	57450	52300	46080	40170
3	48000	46740	46700	48930	51990	55640	93330	57970	57220	52080	45830	39980
4	47790	46660	46660	49230	51990	55730	90990	57780	57080	52300	45550	39760
5	47620	46700	46660	49350	52120	55870	88860	57640	56840	52260	45460	39570
6	47660	46620	46580	50120	52080	56240	86640	57450	56520	52030	45340	39420
7	47490	46540	46950	50210	52080	56700	84570	57220	56290	51900	45060	39270
8	47410	46490	46990	50380	52080	57780	82530	57120	56100	51730	44850	39080
9	47280	46740	47120	50550	52170	58020	80510	56980	55910	51510	44610	38790
10	47330	46450	47080	50600	52300	57780	78520	56800	56010	51330	44370	38600
11	47280	46450	46990	50680	52170	57590	76510	56560	56420	51120	44170	38530
12	47490	46540	46910	50810	52390	57220	74690	56470	56380	51120	43970	38340
13	47200	46540	46910	50810	52430	56980	73220	56330	56240	50860	43840	38130
14	47080	46660	46870	50940	52520	56890	71930	56150	56150	50680	43600	37980
15	46990	46580	46870	50860	52610	57640	70970	56010	55960	50470	43440	37800
16	46910	46540	46910	50940	52830	75960	69860	55870	55780	50300	43290	38020
17	46870	46490	46870	50900	52880	96520	68700	55730	55550	50080	43090	37940
18	46740	46490	46870	50990	53010	105100	67610	55550	55410	49950	42850	37870
19	46700	46450	46870	50900	53100	109700	66580	55360	55220	49690	42770	37800
20	46700	46490	47490	50990	53190	110800	65820	55180	55040	49480	42570	37690
21	46740	46490	47540	51160	53720	110600	64650	55040	54810	49230	42300	37550
22	46540	46490	47870	51120	54270	109800	63700	54860	54580	49010	42140	37550
23	47080	46410	48250	51200	54720	108900	62850	54720	54360	48760	41940	37330
24	47240	46410	48330	51120	54810	107900	62060	54490	54090	48500	41830	37150
25	47450	46410	48550	51250	55450	106800	61330	54580	53900	48210	41630	36970
26	47160	46490	48800	51250	55590	105600	61180	54990	53680	47950	41400	36830
27	46990	46450	48760	51250	55640	104600	60410	57170	53410	47700	41250	36800
28	46950	46580	48880	51330	55640	103500	59730	58160	53230	47410	41050	36620
29	46910	46620	48800	51330	---	102300	59060	58350	53010	47080	40860	36480
30	46950	46490	48800	51330	---	101300	58540	58210	52790	46870	40670	36340
31	46910	---	48800	51600	---	99380	---	57970	---	46580	40480	---
MAX	48420	46870	48880	51600	55640	110800	97400	58350	57690	52560	46330	40330
MIN	46540	46410	46450	48800	51770	55640	58540	54490	52790	46580	40480	36340
(+)	1160.00	1159.90	1160.45	1161.10	1162.00	1169.93	1162.62	1162.49	1161.36	1159.92	1158.38	1157.25
(@)	-1720	-420	+2310	+2800	+4040	+43740	-40840	-570	-5180	-6210	-6100	-4140

CAL YR 1997 MAX 168000 MIN 46410 (@) -7440
WTR YR 1998 MAX 110800 MIN 36340 (@) -12290

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08100000 LEON RIVER NEAR HAMILTON, TX
(Flood-hydrograph partial-record station)

LOCATION.--Lat 31°47'19", long 98°07'16", Hamilton County, Hydrologic Unit 12070201, at downstream side of bridge on U.S. Highway 281, 2.2 mi upstream from Mesquite Creek, 3.6 mi downstream from Bear Creek, 5.9 mi north of Hamilton, and 172.9 mi upstream from mouth.

DRAINAGE AREA.--1,891 mi².

PERIOD OF RECORD.--Jan 1925 to Sep 1931, Sep 1960 to Sep 1996 (daily mean discharge), Oct 1996 to current year (peak discharges greater than base discharge).

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 955.38 ft above sea level. Jan 7, 1925, to Sep 30, 1931, nonrecording gage 1.4 mi downstream at datum 1.87 ft higher. Sep 1 to Nov 22, 1960, nonrecording gage at same site and at 5.00 ft higher datum. Nov 22, 1960 to Sep 30, 1972, recording gage at same site and at 5.00 ft higher datum. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1964, at least 10% of contributing drainage area has been regulated by Proctor Lake (station 08099400) 54 miles upstream and by several other smaller reservoirs. There are numerous diversions above station for irrigation, municipal supply, and for industrial uses. Flow is affected at times by discharge from the flood-detention pools of 14 floodwater-retarding structures with a combined detention capacity of 11,610 acre-ft. These structures control runoff from 43.9 mi².

AVERAGE DISCHARGE.-- 9 years (water years 1926-31, 1961-63) prior to regulation by Proctor Lake 148 ft³/s (107,500 acre-ft/yr); 33 years (water years 1964-96) regulated, 212 ft³/s (153,600 acre-ft/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft³/s Sep 9, 1962 (gage height, 26.93 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1858, 38.4 ft in May 1908 and Dec 1913; flood in Sep 1911 reached a stage of 37.0 ft, all at present site and datum, from information by local residents. The flood in Oct 1959 reached a stage of 34.1 ft, present datum.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 16	1430	8,680	28.64	No other peak greater than base discharge.			

08100500 LEON RIVER AT GATESVILLE, TX

LOCATION.--Lat 31°25'58", long 97°45'42", Coryell County, Hydrologic Unit 12070201, on right bank at upstream side of county road bridge, 800 ft downstream from U.S. Highway 84 bridge in Gatesville, 0.3 mi downstream from Dodds Creek, 5.2 mi upstream from Cottonwood Creek, and 99.0 mi upstream from mouth.

DRAINAGE AREA.--2,342 mi².

PERIOD OF RECORD.--Oct 1950 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 723.85 ft above sea level. Oct 1, 1950 to Feb 8, 1951, nonrecording gage and Feb 9, 1951 to Jan 21, 1969, water-stage recorder at site 800 ft upstream at same datum. Satellite telemeter at station.

REMARKS.--Records fair. Since 1963, at least 10% of contributing drainage area has been regulated by Proctor Lake (08099400) and other smaller reservoirs. Flow at times is slightly affected by discharge from 18 floodwater-retarding structures with a combined detention capacity of 12,600 acre-ft. These structures control runoff from 47.0 mi² in the northeast tributaries and Pecan Creek drainage basins. There are numerous diversions above station for irrigation, municipal supply, and oil field operation. The city of Hamilton, located about 70 mi upstream from this station, diverts flow from the river for municipal use and returns wastewater effluent to the stream. The city of Gatesville obtains all of their municipal water supply from ground-water wells, but discharges wastewater effluent back to the Leon River downstream from this station.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--13 years, (water years 1951-1963), 267 ft³/s (193,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1951-1963).--Maximum discharge, 51,200 ft³/s Oct 4, 1959 (gage height, 34.14 ft), from rating curve extended above 41,000 ft³/s; no flow at times in 1951-52 and 1954-55.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854, about 35 ft in May 1908, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	62	50	80	185	641	1190	444	123	32	14	22
2	84	59	53	81	139	416	1210	432	98	31	22	21
3	79	55	57	82	128	359	1270	398	131	28	23	19
4	77	53	54	89	123	334	1330	341	135	28	20	16
5	73	53	55	92	128	320	1340	257	134	29	19	14
6	69	50	56	255	125	305	1360	226	109	30	27	13
7	75	48	61	917	116	303	1460	209	84	42	22	11
8	96	46	64	305	114	310	1500	197	81	130	18	11
9	98	47	60	262	113	343	1450	184	84	81	16	13
10	113	48	63	222	129	367	1400	174	85	67	14	12
11	113	44	58	207	137	344	1340	166	98	58	13	15
12	140	51	59	184	125	312	1290	154	93	48	12	19
13	142	54	67	161	155	395	1250	128	93	41	21	15
14	149	56	60	149	147	410	1200	122	73	36	30	15
15	137	56	55	141	165	436	1150	116	103	38	32	16
16	118	52	52	136	170	11300	1030	111	101	32	33	141
17	108	54	52	126	173	11400	845	103	80	29	34	37
18	100	56	51	120	175	9600	769	107	68	29	36	50
19	83	55	50	114	259	7930	737	108	60	26	36	43
20	70	54	1800	112	222	2570	716	100	54	30	35	38
21	66	53	1470	109	453	1720	705	94	49	30	34	36
22	65	52	178	108	2090	1610	696	93	47	29	30	40
23	66	53	145	105	1410	1550	671	87	44	28	31	34
24	65	53	162	104	938	1540	651	79	40	25	28	31
25	109	53	143	101	567	1450	627	74	40	22	25	26
26	211	51	122	101	1020	1370	562	73	41	20	22	24
27	156	51	108	94	857	1310	507	84	40	20	21	23
28	101	52	100	96	966	1260	481	85	37	23	19	21
29	80	51	97	93	---	1220	502	120	34	21	23	18
30	71	50	89	90	---	1240	467	228	32	18	26	16
31	66	---	83	162	---	1320	---	175	---	15	24	---
TOTAL	3068	1572	5574	4998	11329	63985	29706	5269	2291	1116	760	810
MEAN	99.0	52.4	180	161	405	2064	990	170	76.4	36.0	24.5	27.0
MAX	211	62	1800	917	2090	11400	1500	444	135	130	36	141
MIN	65	44	50	80	113	303	467	73	32	15	12	11
AC-FT	6090	3120	11060	9910	22470	126900	58920	10450	4540	2210	1510	1610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998z, BY WATER YEAR (WY)

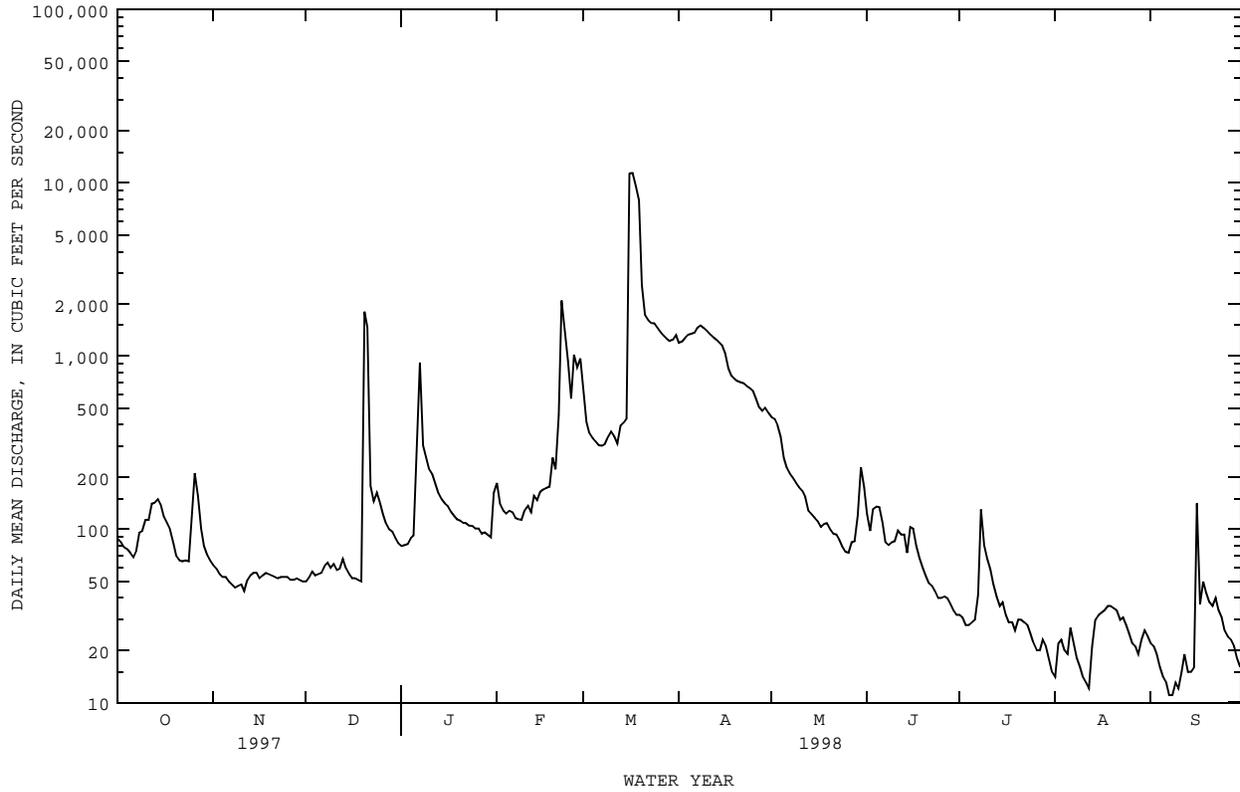
MEAN	122	138	253	213	397	438	476	763	575	336	197	172
MAX	714	907	4580	2517	3752	3014	2134	4899	2191	1482	1497	970
(WY)	1965	1992	1992	1992	1992	1997	1995	1990	1987	1997	1995	1996
MIN	.42	1.18	.39	1.50	5.02	7.06	.64	4.66	2.22	.17	.041	.000
(WY)	1979	1979	1984	1984	1984	1986	1984	1984	1978	1978	1984	1984

BRAZOS RIVER BASIN

08100500 LEON RIVER AT GATESVILLE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998z	
ANNUAL TOTAL	452930		130478		340	
ANNUAL MEAN	1241		357		1758	
HIGHEST ANNUAL MEAN					6.22	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	14000	Feb 23	11400	Mar 17	49100	Dec 21 1991
LOWEST DAILY MEAN	44	Nov 11	11	Sep 7	.00	Jul 21 1971
ANNUAL SEVEN-DAY MINIMUM	48	Nov 6	13	Sep 5	.00	Aug 13 1984
INSTANTANEOUS PEAK FLOW			22800	Mar 16	68000	Dec 21 1991
INSTANTANEOUS PEAK STAGE			29.14	Mar 16	35.00	Dec 21 1991
ANNUAL RUNOFF (AC-FT)	898400		258800		246000	
10 PERCENT EXCEEDS	3080		1020		890	
50 PERCENT EXCEEDS	655		87		48	
90 PERCENT EXCEEDS	56		22		2.2	

z Period of regulated streamflow.



08100600 LEON RIVER AT NORTH FORT HOOD, TX

LOCATION.--Lat 31°23'01", long 97°42'06", Coryell County, on downstream side of State Highway 36, 9.8 mi downstream from City of Gatesville Wastewater Disposal Plant.

DRAINAGE AREA.--2,416 mi.2.

PERIOD OF RECORD.-- Chemical and biochemical analyses; Dec 1993 to current year.

REMARKS.--Samples collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DEMAND, (PER-CENT SATUR-ATION) (00301)	OXYGEN, DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
OCT 28...	1020	123	804	8.0	14.0	12	7.8	9.6	95	.6	320
JAN 14...	1205	214	764	8.2	10.0	15	12	11.0	100	1.0	320
FEB 12...	1407	133	795	7.7	11.5	14	5.5	11.2	104	1.7	320
MAY 06...	1040	250	756	7.7	23.5	23	30	8.0	97	3.2	270
JUN 30...	1025	34	813	7.5	29.0	13	9.0	6.3	84	.8	290
AUG 03...	1035	24	839	8.0	29.0	14	9.1	12.1	162	.8	310

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT 28...	97	85	25	52	1	5.7	220	55	84	.28	10
JAN 14...	74	91	23	40	1	3.6	250	64	61	.38	7.8
FEB 12...	59	86	25	44	1	2.8	260	64	64	.40	2.0
MAY 06...	75	74	21	46	1	5.5	200	53	74	.35	5.6
JUN 30...	65	75	25	50	1	5.2	230	52	76	.55	7.5
AUG 03...	90	72	31	62	2	5.9	220	60	88	.58	8.8

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT 28...	453	17	7	10	.762	.010	.772	<.020	--	.27	.049
JAN 14...	443	20	8	12	.973	.012	.985	<.020	--	.24	.055
FEB 12...	449	10	5	5	--	<.010	.572	.034	.16	.19	.027
MAY 06...	401	106	18	88	--	<.010	.253	<.020	--	.35	.027
JUN 30...	432	26	6	20	.930	.024	.954	<.020	--	.33	.236
AUG 03...	464	22	3	19	.816	.015	.831	.052	.29	.34	.340

BRAZOS RIVER BASIN

08100600 LEON RIVER AT NORTH FORT HOOD, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 28...	.054	.17	5.2	--	--	--	--	--	--	--	--
JAN 14...	.062	.19	3.9	--	--	--	--	--	--	--	--
FEB 12...	.036	.11	3.9	<1	118	<1.0	<8.0	<14	<12	<10	<10
MAY 06...	.028	.09	8.8	1	142	<1.0	<8.0	<14	<12	<10	<10
JUN 30...	.233	.71	4.4	--	--	--	--	--	--	--	--
AUG 03...	.321	.98	4.6	4	179	<1.0	<8.0	<14	<12	<10	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 28...	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	<100	13	12	<.1	<60	<40	<1	<4.0	750	<10	<20
MAY 06...	<100	10	<4.0	<.1	<60	<40	<1	<4.0	610	<10	<20
JUN 30...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	<100	16	9.7	<.1	<60	<40	<1	<4.0	784	<10	<20

08101000 COWHOUSE CREEK AT PIDCOKE, TX

LOCATION.--Lat 31°17'05", long 97°53'05", Coryell County, Hydrologic Unit 12070202, on left bank on upstream side of bridge on Farm Road 116, 0.1 mi downstream from Bee House Creek, 0.6 mi northeast of Pidcoke, 4.9 mi upstream from Table Rock Creek, and 34.6 mi upstream from mouth.

DRAINAGE AREA.--455 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct 1950 to current year.

REVISED RECORDS.--WSP 1712: 1955. WSP 1922: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 736.71 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair. No known regulation or diversions. Several observations of water temperatures were made during the year.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 20	1830	5,810	13.73	Mar 16	0900	60,500	39.70
Feb 21	2330	7,310	15.78				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.2	4.7	18	133	169	227	59	14	3.8	.00	.00
2	3.3	2.9	5.1	19	73	147	192	67	12	3.6	.00	.00
3	3.3	3.0	5.9	19	50	128	175	66	30	3.3	.00	.00
4	3.2	3.0	5.7	20	42	120	159	65	37	3.8	.00	.00
5	3.1	3.0	6.6	20	44	112	155	60	53	3.4	.00	.00
6	3.1	2.9	6.6	211	40	96	143	57	53	3.5	.03	.00
7	3.6	2.9	7.2	820	34	98	143	58	48	3.5	.00	.00
8	4.4	3.1	8.7	328	32	113	144	55	39	2.9	.00	.00
9	4.1	3.1	8.6	203	30	96	145	51	30	2.6	.00	.00
10	4.4	3.3	14	137	45	80	127	38	21	2.5	.00	.00
11	5.5	3.1	16	113	70	71	108	30	43	2.2	.00	.00
12	8.5	4.6	9.6	101	46	63	108	42	88	1.7	.00	.00
13	9.1	5.3	7.2	77	93	62	110	52	47	.78	.00	.00
14	6.7	5.2	6.3	67	70	66	102	49	23	.06	.00	.00
15	7.6	5.3	6.2	60	76	104	89	45	33	.81	.00	.00
16	7.0	4.7	6.0	52	83	18600	83	35	21	2.4	.00	2.0
17	5.5	3.8	5.9	42	86	1820	73	30	15	4.4	.00	8.9
18	4.8	3.7	6.0	39	83	891	71	33	12	2.3	.00	3.5
19	4.4	3.6	5.7	33	255	654	68	34	12	2.2	.00	2.7
20	3.9	3.8	1260	32	125	550	67	29	10	3.1	.00	2.3
21	3.6	3.7	416	30	861	495	68	24	8.7	2.4	.00	2.0
22	3.5	5.1	79	27	2300	455	66	22	7.5	1.6	.00	1.5
23	3.5	4.9	48	27	505	400	61	18	7.0	.60	.00	.80
24	3.7	4.6	56	27	259	352	70	15	6.1	.08	.00	.00
25	3.6	4.3	38	26	210	323	62	15	5.8	.00	.00	.00
26	3.5	4.0	33	26	926	280	59	16	5.3	.00	.00	.00
27	3.2	3.9	32	23	371	226	120	24	4.4	.00	.00	.00
28	3.2	4.2	29	23	222	209	62	23	4.4	.00	.00	.00
29	3.3	4.6	25	22	---	196	54	20	4.0	.00	.00	.00
30	3.3	4.9	23	21	---	243	54	17	3.7	.00	.00	.00
31	3.3	---	20	97	---	293	---	15	---	.00	.00	---
TOTAL	136.6	117.7	2201.0	2760	7164	27512	3165	1164	697.9	57.53	0.03	23.70
MEAN	4.41	3.92	71.0	89.0	256	887	106	37.5	23.3	1.86	.001	.79
MAX	9.1	5.3	1260	820	2300	18600	227	67	88	4.4	.03	8.9
MIN	3.1	2.9	4.7	18	30	62	54	15	3.7	.00	.00	.00
AC-FT	271	233	4370	5470	14210	54570	6280	2310	1380	114	.06	47
CFSM	.01	.01	.16	.20	.56	1.95	.23	.08	.05	.00	.00	.00
IN.	.01	.01	.18	.23	.59	2.25	.26	.10	.06	.00	.00	.00

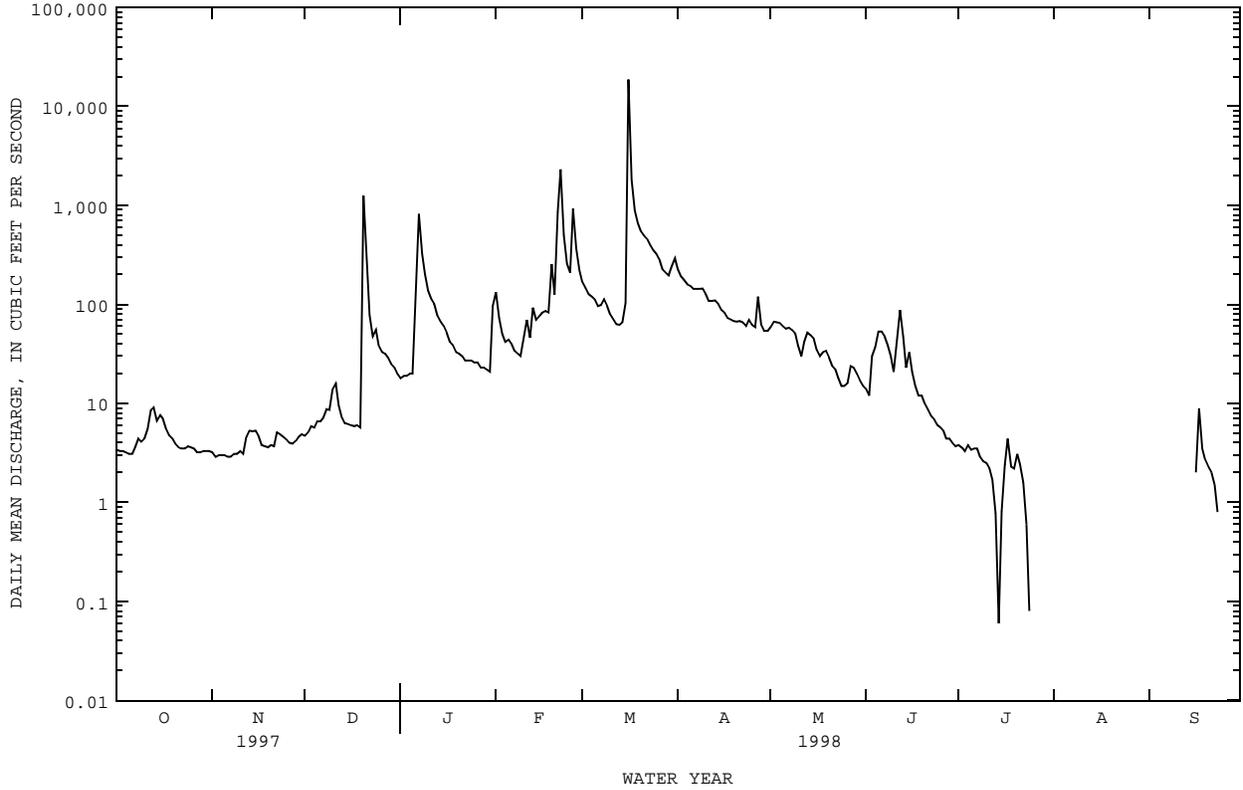
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

	MEAN	80.4	37.7	84.3	76.0	160	143	144	229	117	35.8	19.7	34.0
MAX	1416	425	1894	767	2170	1274	1033	2116	702	399	240	433	
(WY)	1960	1966	1992	1961	1997	1997	1957	1965	1987	1976	1966	1970	
MIN	.000	.000	.000	.000	.000	.010	.000	.76	.073	.000	.000	.000	
(WY)	1952	1952	1952	1952	1952	1952	1956	1978	1956	1954	1951	1952	

BRAZOS RIVER BASIN

08101000 COWHOUSE CREEK AT PIDCOKE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL TOTAL	166506.3		44999.46		96.4	
ANNUAL MEAN	456		123		1.18	
HIGHEST ANNUAL MEAN					482	1992
LOWEST ANNUAL MEAN					1.18	1978
HIGHEST DAILY MEAN	13600	Feb 20	18600	Mar 16	35200	Oct 4 1959
LOWEST DAILY MEAN	2.6	Sep 21	.00	Jul 25	.00	May 21 1951
ANNUAL SEVEN-DAY MINIMUM	3.0	Nov 2	.00	Jul 25	.00	Jul 6 1951
INSTANTANEOUS PEAK FLOW			60500	Mar 16	110000	Dec 20 1991
INSTANTANEOUS PEAK STAGE			39.70	Mar 16	44.30	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	330300		89260		69830	
ANNUAL RUNOFF (CFSM)	1.00		.27		.21	
ANNUAL RUNOFF (INCHES)	13.61		3.68		2.88	
10 PERCENT EXCEEDS	1230		157		149	
50 PERCENT EXCEEDS	81		12		6.3	
90 PERCENT EXCEEDS	3.6		.00		.00	



BRAZOS RIVER BASIN

08101000 COWHOUSE CREEK AT PIDCOKE, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Dec 1993 to current year.

REMARKS.--Samples collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)
OCT 28...	1255	16	525	8.3	15.5	6	.42	10.4	107	.4	240
JAN 14...	1527	70	538	8.3	11.0	6	.35	10.9	101	.5	260
FEB 13...	0915	92	532	8.0	11.0	8	1.6	10.3	96	.5	260
MAY 05...	1830	49	618	7.9	27.5	8	1.4	10.0	132	1.0	280
JUN 30...	1220	3.6	554	7.7	30.0	10	2.2	5.9	80	.6	250
AUG 03...	1250	E.20	513	7.9	32.5	11	.25	14.2	202	1.1	250

DATE	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT 28...	44	51	28	18	.5	2.0	200	38	22	.36	8.1
JAN 14...	53	71	21	16	.4	1.7	210	34	20	.38	8.2
FEB 13...	46	68	22	16	.4	1.4	220	35	21	.37	5.5
MAY 05...	66	67	28	19	.5	1.8	220	38	21	.39	7.4
JUN 30...	38	53	29	18	.5	2.0	210	30	21	.42	17
AUG 03...	40	48	32	20	.5	2.2	210	26	21	.39	21

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDEDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDEDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT 28...	287	<1	2	--	--	<.010	.139	<.015	--	<.20	<.010
JAN 14...	300	<1	4	--	--	<.010	.376	<.020	--	.12	<.010
FEB 13...	302	1	1	.00	--	<.010	.365	<.020	--	.12	<.010
MAY 05...	319	3	6	.00	.804	.010	.814	.024	.13	.16	<.010
JUN 30...	299	6	1	5	--	<.010	.130	<.020	--	.20	<.010
AUG 03...	298	<1	5	--	--	<.010	.051	.039	.15	.19	<.010

BRAZOS RIVER BASIN

08101000 COWHOUSE CREEK AT PIDCOKE, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 28...	<.010	--	1.9	--	--	--	--	--	--	--	--
JAN 14...	.012	.04	2.3	--	--	--	--	--	--	--	--
FEB 13...	.014	.04	1.7	<1	52	<1.0	<8.0	<14	<12	<10	<10
MAY 05...	<.010	--	2.1	1	71	<1.0	<8.0	<14	<12	<10	<10
JUN 30...	<.010	--	3.3	--	--	--	--	--	--	--	--
AUG 03...	<.010	--	3.6	2	65	<1.0	<8.0	<14	<12	<10	<10

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 28...	--	--	--	--	--	--	--	--	--	--	--
JAN 14...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	<100	10	<4.0	<.1	<60	<40	<1	<4.0	1030	<10	<20
MAY 05...	<100	11	4.4	<.1	<60	<40	<1	<4.0	1070	10	<20
JUN 30...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	<100	13	6.3	.1	<60	<40	<1	<4.0	1140	<10	38

08102000 BELTON LAKE NEAR BELTON, TX

LOCATION.--Lat 31°06'22", long 97°28'28", Bell County, Hydrologic Unit 12070201, in intake structure at Belton Dam on Leon River, 1.6 mi upstream from bridge on State Highway 317, 3.5 mi north of Belton, 8.9 mi upstream from Nolan Creek, and 16.7 mi upstream from mouth.

DRAINAGE AREA.--3,531 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Mar 1954 to current year. Prior to Oct 1970, published as Belton Reservoir.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Prior to Feb 20, 1955, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 5,524 ft long, including a 1,300-foot uncontrolled broad-crested spillway in a saddle near left end of dam and a 418-foot-long dike. Deliberate impoundment began Mar 8, 1954, and the dam was completed in Dec 1954. The lake was built for flood control and conservation storage. The controlled outlet works consist of a 22.0-foot-diameter conduit that is controlled by three 7.0- by 22.0-foot broome-type gates. The service outlet consists of a 36- by 36-inch gated outlet that discharges into the flood-control conduit. There are many small diversions upstream for irrigation, municipal supply, and oil field operations. For statement regarding regulation by National Resource Conservation Service floodwater-retarding structures, see station 08100500. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	662.0
Design flood.....	656.9
Crest of spillway.....	631.0
Top of conservation pool.....	594.0
Service outlet (invert).....	540.0
Lowest gated outlet (invert).....	483.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,168,000 acre-ft, Mar 6, 1992 (elevation, 634.36 ft); minimum since initial filling, 113,400 acre-ft, Dec 16, 1956 (elevation, 553.06 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 552,800 acre-ft, Mar 21 (elevation, 602.84 ft); minimum daily contents, 403,100 acre-ft, Sep 10 (elevation, 591.39 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	429500	428900	431400	478100	440300	464400	520900	438700	435000	426700	412500	406600
2	429300	428700	432500	473500	440900	462200	515700	438900	434600	426100	412100	406200
3	428900	428300	432500	469000	440900	459300	510300	438900	434300	425600	411600	405900
4	428700	427900	432000	466100	440800	456400	504900	438800	434200	425600	411200	405400
5	428600	428100	432100	465200	440700	453600	499800	438800	434600	425400	410900	405100
6	428600	427700	432100	472300	440100	450300	494500	438700	434100	425000	412300	404600
7	429200	427500	432400	488100	439200	447200	489600	438600	433800	424700	412100	404200
8	429000	427200	432200	493200	438600	443800	485200	438300	433600	424200	411700	403800
9	429500	428900	432500	492300	437800	440700	480200	437700	433300	423800	411300	403400
10	429900	428600	432200	488900	439700	439100	475200	437100	433100	423400	410900	403100
11	430600	428900	432100	484300	439700	438600	469700	436700	433700	423000	410500	404700
12	432200	430500	431900	479000	439600	437800	464200	436600	433700	423000	410200	405200
13	432000	430800	431700	473200	439400	437700	459100	436700	433500	422200	409900	405000
14	431700	431000	431600	467600	439200	438200	453500	436600	433300	422500	410600	404800
15	431600	431400	431400	461200	438900	439300	448600	436700	433100	421900	410400	404700
16	431500	431200	431600	457100	439100	487300	444800	436600	432500	421500	410000	407100
17	431400	431000	431500	454600	438700	507000	442700	436400	432200	421300	409800	407500
18	431100	431100	431200	452500	438600	525700	441700	436100	431900	420800	409700	408000
19	431100	430900	431500	449700	439100	540600	440600	435800	431500	420300	409600	407900
20	431000	430800	481500	447400	438700	551100	440600	435600	431000	418400	409200	407800
21	431000	430800	509000	445500	442400	552800	438900	435400	430500	418000	409000	407700
22	430600	430800	513500	442600	455700	551300	438300	435200	430000	417600	408600	407400
23	430400	430600	511300	440800	460800	549000	438300	435000	429700	417100	408400	407700
24	430100	430500	508600	439300	462000	546600	437800	434800	428900	416600	408000	407300
25	430300	430500	505600	438200	463700	543900	437800	434800	428900	416100	407800	407200
26	429500	430500	502600	436900	467200	540700	438700	434700	428800	415600	407400	407100
27	429300	430500	499000	436200	467600	538300	439200	435700	428400	415200	407100	406800
28	429200	431900	495800	436100	466000	535100	438800	435600	427900	414600	406800	406800
29	429000	431700	492000	435900	---	531700	438400	435600	427500	414000	407700	406600
30	429000	431700	488000	436100	---	529600	438300	435200	427100	413400	407200	406400
31	429200	---	483000	438100	---	525800	---	435100	---	413100	407000	---
MAX	432200	431900	513500	493200	467600	552800	520900	438900	435000	426700	412500	408000
MIN	428600	427200	431200	435900	437800	437700	437800	434700	427100	413100	406800	403100
(+)	593.56	593.77	597.78	594.28	596.48	600.93	594.30	594.04	593.39	592.23	591.72	591.67
(@)	-500	+2500	+51300	-44900	+27900	+59800	-87500	-3200	-8000	-14000	-6100	-600

CAL YR 1997 MAX 669500 MIN 427200 (@) +45300
WTR YR 1998 MAX 552800 MIN 403100 (@) -23300

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Oct 1961 to Sep 1984, Jan 1994 to Sep 1998 (discontinued).

REMARKS.--Samples collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

310640097283701 - BELTON LAKE SITE AC

DATE	TIME	RESER- VOIR STORAGE (AC-FT) (00054)	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
FEB												
12...	1000	440000	1.00	450	8.3	12.0	1.13	9.5	89	K2	K1	160
12...	1002	--	10.0	449	8.3	12.0	--	9.4	88	--	--	--
12...	1004	--	20.0	453	8.3	12.0	--	9.4	88	--	--	--
12...	1006	--	30.0	451	8.3	11.5	--	9.4	87	--	--	--
12...	1008	--	40.0	451	8.3	11.5	--	9.4	87	--	--	--
12...	1010	--	50.0	452	8.3	11.5	--	9.4	87	--	--	--
12...	1012	--	60.0	453	8.2	11.5	--	9.2	85	--	--	--
12...	1014	--	70.0	453	8.2	11.5	--	9.1	84	--	--	--
12...	1016	--	80.0	453	8.2	11.5	--	9.2	85	--	--	--
12...	1018	--	90.0	451	8.2	11.5	--	9.2	85	--	--	--
12...	1020	--	100	454	8.3	11.5	--	8.9	82	--	--	--
12...	1022	--	110	431	8.3	11.5	--	8.7	81	--	--	160
MAY												
05...	0855	439000	1.00	424	8.4	20.5	1.83	8.1	92	0	0	180
05...	0857	--	10.0	423	8.4	20.5	--	8.0	91	--	--	--
05...	0859	--	20.0	422	8.2	20.0	--	6.9	78	--	--	--
05...	0901	--	30.0	423	8.1	19.5	--	6.4	71	--	--	--
05...	0903	--	40.0	422	8.1	19.2	--	6.4	71	--	--	--
05...	0905	--	50.0	422	8.0	18.5	--	5.9	65	--	--	--
05...	0907	--	60.0	423	7.9	18.0	--	5.4	58	--	--	--
05...	0909	--	70.0	425	7.8	17.0	--	5.2	55	--	--	--
05...	0911	--	80.0	428	7.7	17.0	--	4.3	46	--	--	--
05...	0913	--	90.0	432	7.6	16.5	--	3.5	37	--	--	--
05...	0915	--	100	435	7.6	16.0	--	3.6	37	--	--	--
05...	0917	--	107	435	7.6	16.0	--	3.6	37	--	--	170
AUG												
17...	0938	410000	1.00	411	8.3	29.0	2.32	6.2	82	0	0	150
17...	0940	--	10.0	412	8.3	29.0	--	5.9	78	--	--	--
17...	0942	--	20.0	413	8.2	29.0	--	5.9	78	--	--	--
17...	0944	--	30.0	424	7.5	27.5	--	1.0	13	--	--	--
17...	0946	--	40.0	437	7.3	24.5	--	.1	1	--	--	--
17...	0948	--	50.0	427	7.3	20.5	--	.1	1	--	--	--
17...	0950	--	60.0	424	7.3	19.5	--	.1	1	--	--	--
17...	0952	--	70.0	428	7.3	19.0	--	.0	0	--	--	--
17...	0954	--	80.0	427	7.3	18.5	--	.0	0	--	--	--
17...	0956	--	90.0	426	7.2	18.5	--	.0	0	--	--	--
17...	0958	--	104	429	7.2	18.5	--	.0	0	--	--	180

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

310640097283701 - BELTON LAKE SITE AC

DATE	HARD- NESS NONCARB DISSOLV FLD. AS (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L) AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L) AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB												
12...	29	45	12	25	.8	4.6	130	28	39	.24	7.1	243
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--
12...	31	46	12	26	.9	4.6	130	28	41	.24	7.5	247
MAY												
05...	29	54	10	18	.6	3.6	150	24	24	.26	6.8	232
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--	--
05...	24	54	9.5	18	.6	3.8	150	24	25	.26	8.5	237
AUG												
17...	44	41	12	22	.8	4.1	110	28	34	.26	4.9	212
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
17...	32	54	9.9	17	.6	3.8	140	20	25	.23	11	228

BRAZOS RIVER BASIN

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

310640097283701 - BELTON LAKE SITE AC

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB											
12...	--	<.010	.315	.027	.19	.22	<.010	.016	.05	<10	<4.0
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	.317	.050	.21	.26	<.010	.020	.06	<10	5.9
MAY											
05...	.453	.017	.470	<.020	--	.25	<.010	<.010	--	<10	<4.0
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	<.010	.568	<.020	--	.38	<.010	<.010	--	<10	<4.0
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	<.010	.831	.021	.20	.23	<.010	.016	.05	<10	<4.0
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	<.010	.802	.023	.22	.24	.016	.020	.06	<10	5.2
AUG											
17...	--	<.010	<.050	.057	.19	.25	<.010	.014	.04	<10	<4.0
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	<.010	<.050	.064	.19	.26	<.010	.014	.04	<10	5.6
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	<.010	<.050	.371	.18	.55	.032	.051	.16	72	207

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

310711097302201 - BELTON LAKE SITE BC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (PER-CENT) (00301)
FEB							
12...	1044	1.00	449	8.3	12.0	9.6	90
12...	1046	10.0	449	8.3	12.0	9.4	88
12...	1048	20.0	450	8.3	12.0	9.4	88
12...	1050	30.0	451	8.3	11.5	9.4	87
12...	1052	40.0	451	8.2	11.5	9.3	86
12...	1054	50.0	451	8.2	11.5	9.3	86
12...	1056	60.0	452	8.2	11.5	9.1	84
12...	1058	70.0	451	8.2	11.5	9.1	84
12...	1100	80.0	451	8.2	11.5	9.0	83
12...	1102	90.0	448	8.2	11.5	8.9	82
12...	1104	101	450	8.2	11.5	9.0	83
MAY							
05...	1001	1.00	425	8.4	21.5	8.1	94
05...	1003	10.0	425	8.3	21.0	7.4	85
05...	1005	20.0	425	8.2	20.0	7.0	79
05...	1007	30.0	425	8.2	20.0	6.4	72
05...	1009	40.0	425	8.1	19.5	5.8	65
05...	1011	50.0	425	8.0	19.0	5.7	63
05...	1013	60.0	425	7.8	18.0	4.0	43
05...	1015	70.0	430	7.7	17.5	3.3	35
05...	1017	80.0	430	7.6	16.5	2.2	23
05...	1019	90.0	435	7.5	16.0	1.2	12
05...	1021	102	435	7.5	16.0	.8	8
AUG							
17...	1040	1.00	419	8.3	29.0	6.2	82
17...	1042	10.0	418	8.3	29.0	6.2	82
17...	1044	20.0	418	8.2	29.0	5.9	78
17...	1046	30.0	426	7.6	28.0	2.2	28
17...	1048	40.0	445	7.3	24.0	.0	0
17...	1050	50.0	444	7.3	20.5	.0	0
17...	1052	60.0	444	7.2	19.5	.0	0
17...	1054	70.0	444	7.2	19.0	.0	0
17...	1056	80.0	442	7.2	19.0	.0	0
17...	1058	90.0	440	7.2	18.5	.0	0
17...	1100	99.0	440	7.2	18.5	.0	0

310829097312201 - BELTON LAKE SITE CC

DATE	TIME	SAM-PLING DEPTH (FEET) (00003)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	TRANS-PAR-ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (PER-CENT) (00301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
FEB										
12...	1122	1.00	445	8.3	12.0	.61	9.4	88	--	<.010
12...	1124	10.0	444	8.2	12.0	--	9.2	86	--	--
12...	1126	20.0	445	8.2	11.5	--	9.2	85	--	--
12...	1128	30.0	446	8.2	11.5	--	9.2	85	--	--
12...	1130	40.0	447	8.2	11.5	--	9.1	84	--	--
12...	1132	50.0	446	8.2	11.5	--	9.2	85	--	--
12...	1134	60.0	447	8.2	11.5	--	9.0	84	--	--
12...	1136	74.0	447	8.2	11.5	--	9.1	84	.880	.016
MAY										
05...	1040	1.00	425	8.5	22.5	1.22	9.1	107	.382	.021
05...	1042	10.0	425	8.5	22.5	--	8.8	104	--	--
05...	1044	20.0	425	8.5	22.0	--	8.5	99	--	--
05...	1046	30.0	430	8.3	21.0	--	7.0	80	--	--
05...	1048	40.0	425	8.1	19.5	--	5.8	65	--	--
05...	1050	50.0	425	8.0	19.0	--	5.3	58	--	--
05...	1052	60.0	425	7.8	18.5	--	4.2	46	--	--
05...	1054	74.0	430	7.6	18.0	--	2.6	28	--	<.010
AUG										
17...	1114	1.00	418	8.4	29.5	1.83	6.8	90	--	<.010
17...	1116	10.0	418	8.4	29.5	--	6.4	85	--	--
17...	1118	20.0	416	8.1	29.0	--	5.1	67	--	--
17...	1120	30.0	424	7.5	28.0	--	1.0	13	--	--
17...	1122	40.0	447	7.3	23.0	--	.0	0	--	--
17...	1124	50.0	450	7.2	20.5	--	.0	0	--	--
17...	1126	60.0	450	7.2	19.5	--	.0	0	--	--
17...	1128	71.0	452	7.2	19.5	--	.0	0	--	<.010

BRAZOS RIVER BASIN

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

310829097312201 - BELTON LAKE SITE CC

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB									
12...	.315	.021	.22	.25	<.010	.016	.05	<10	<4.0
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	.896	.078	.22	.29	.017	.037	.11	<10	<4.0
MAY									
05...	.403	<.020	--	.25	<.010	<.010	--	<10	<4.0
05...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
05...	.679	<.020	--	.26	<.010	<.010	--	<10	8.0
AUG									
17...	<.050	.052	.20	.25	<.010	.013	.04	<10	<4.0
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	<.050	.906	.27	1.2	.047	.062	.19	120	241

310923097332601 - BELTON LAKE SITE DC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL AS CACO3) (MG/L) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB													
12...	1154	1.00	444	8.2	12.0	.46	9.2	86	K2	K1	170	28	
12...	1156	10.0	444	8.2	11.5	--	9.0	84	--	--	--	--	--
12...	1158	20.0	445	8.2	11.5	--	9.0	84	--	--	--	--	--
12...	1200	25.0	446	8.2	11.5	--	9.0	84	--	--	180	28	
MAY													
05...	1110	1.00	427	8.4	23.0	.91	8.5	101	K1	0	170	23	
05...	1112	10.0	427	8.4	23.0	--	8.5	101	--	--	--	--	--
05...	1114	24.0	430	8.3	23.0	--	8.0	95	--	--	180	21	
AUG													
17...	1146	1.00	413	8.3	30.5	1.04	6.2	84	0	0	150	40	
17...	1148	10.0	414	8.3	29.5	--	6.0	80	--	--	--	--	--
17...	1150	21.0	413	8.2	29.5	--	5.3	70	--	--	150	42	

310923097332601 - BELTON LAKE SITE DC

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB											
12...	49	12	22	.7	4.0	140	27	33	.24	7.2	242
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	51	12	21	.7	3.8	150	27	34	.24	7.0	246
MAY											
05...	52	11	17	.5	3.3	150	24	24	.27	6.9	231
05...	--	--	--	--	--	--	--	--	--	--	--
05...	53	11	17	.6	3.4	160	24	24	.27	7.0	236
AUG											
17...	39	12	23	.8	4.1	110	28	35	.26	5.3	212
17...	--	--	--	--	--	--	--	--	--	--	--
17...	40	12	22	.8	4.2	110	28	34	.26	5.5	209

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

310923097332601 - BELTON LAKE SITE DC

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB											
12...	.321	.011	.332	<.020	--	.21	<.010	.016	.05	<10	<4.0
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	<.010	.326	.024	.22	.25	<.010	.016	.05	<10	<4.0
MAY											
05...	.357	.026	.383	.031	.24	.27	<.010	<.010	--	<10	<4.0
05...	--	--	--	--	--	--	--	--	--	--	--
05...	.354	.025	.379	.048	.21	.26	<.010	<.010	--	<10	<4.0
AUG											
17...	--	<.010	<.050	.054	.21	.26	<.010	.014	.04	<10	<4.0
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	<.010	<.050	.055	.19	.24	<.010	.011	.03	<10	<4.0

310829097294301 - BELTON LAKE SITE EC

DATE	TIME	SAM- PLING DEPTH (FEET) (000003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB							
12...	1224	1.00	442	8.3	12.0	9.6	90
12...	1226	10.0	443	8.3	12.0	9.6	90
12...	1228	20.0	443	8.3	12.0	9.6	90
12...	1230	30.0	447	8.2	11.5	9.3	86
12...	1232	40.0	447	8.2	11.5	9.3	86
12...	1234	50.0	446	8.2	11.5	9.2	85
12...	1236	60.0	445	8.1	11.5	8.8	82
12...	1238	70.0	443	8.1	11.5	9.0	84
12...	1240	80.0	443	8.1	11.5	8.8	82
12...	1242	90.0	442	8.1	11.5	8.8	82
12...	1244	98.0	443	8.2	11.5	8.8	82
MAY							
05...	1135	1.00	425	8.5	22.0	8.6	101
05...	1137	10.0	425	8.5	22.0	8.6	101
05...	1139	20.0	425	8.5	21.5	8.5	99
05...	1141	30.0	430	8.2	20.5	6.4	73
05...	1143	40.0	430	8.1	20.0	5.9	66
05...	1145	50.0	425	8.0	19.5	5.6	62
05...	1147	60.0	430	7.8	18.5	3.7	40
05...	1149	70.0	430	7.6	17.5	2.0	21
05...	1151	80.0	432	7.6	17.0	1.2	13
05...	1153	90.0	437	7.5	16.5	.3	3
05...	1155	96.0	437	7.5	16.0	.9	10
AUG							
17...	1214	1.00	421	8.4	30.0	6.7	90
17...	1216	10.0	422	8.4	29.5	6.6	88
17...	1218	20.0	423	8.3	29.5	6.1	81
17...	1220	30.0	432	7.5	28.0	1.0	13
17...	1222	40.0	451	7.3	24.0	.0	0
17...	1224	50.0	454	7.3	20.5	.0	0
17...	1226	60.0	451	7.2	19.5	.0	0
17...	1228	70.0	459	7.2	19.0	.0	0
17...	1230	80.0	458	7.2	19.0	.0	0
17...	1232	93.0	456	7.2	19.0	.0	0

BRAZOS RIVER BASIN

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

310938097300201 - BELTON LAKE SITE FC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED SATUR- ATION (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
FEB								
12...	1300	1.00	425	8.2	12.0	9.4	88	
12...	1302	10.0	425	8.2	12.0	9.3	87	
12...	1304	20.0	427	8.1	11.5	9.2	85	
12...	1306	30.0	421	8.1	11.5	8.9	83	
12...	1308	40.0	421	8.1	11.5	8.7	81	
12...	1310	50.0	423	8.0	11.5	8.4	78	
12...	1312	60.0	424	8.0	11.5	8.3	77	
12...	1314	70.0	425	8.1	11.5	8.3	77	
12...	1316	75.0	425	8.1	11.5	8.3	77	
MAY								
05...	1216	1.00	440	8.5	23.5	9.3	112	
05...	1218	10.0	440	8.5	23.0	9.1	109	
05...	1220	20.0	490	8.2	21.5	6.6	77	
05...	1222	30.0	490	7.9	20.0	4.6	52	
05...	1224	40.0	450	7.9	20.0	4.5	51	
05...	1226	50.0	451	7.8	19.5	3.1	35	
05...	1228	60.0	450	7.6	18.5	.8	9	
05...	1230	74.0	438	7.5	18.0	.2	2	
AUG								
17...	1244	1.00	434	8.4	30.5	6.6	89	
17...	1246	10.0	432	8.3	30.0	6.5	87	
17...	1248	20.0	438	7.8	29.5	3.6	48	
17...	1250	30.0	443	7.4	28.5	.0	0	
17...	1252	40.0	472	7.2	23.0	.0	0	
17...	1254	50.0	489	7.1	20.5	.0	0	
17...	1256	60.0	483	7.1	20.0	.0	0	
17...	1258	69.0	483	7.1	20.0	.0	0	

311004097275601 - BELTON LAKE SITE GC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED SATUR- ATION (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION (MG/L) (00301)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
FEB										
12...	1330	1.00	403	8.2	12.0	.91	9.4	88	.832	.014
12...	1332	10.0	403	8.1	12.0	--	9.1	86	--	--
12...	1334	20.0	400	8.1	11.5	--	9.0	84	--	--
12...	1336	30.0	401	8.1	11.5	--	8.9	83	--	--
12...	1338	40.0	400	8.0	11.5	--	8.5	79	--	--
12...	1340	50.0	398	8.0	11.5	--	8.4	78	--	--
12...	1342	62.0	400	8.1	11.5	--	8.3	77	--	<.010
MAY										
05...	1245	1.00	470	8.4	23.0	1.52	8.9	106	.305	.014
05...	1247	10.0	480	8.4	22.5	--	8.5	101	--	--
05...	1249	20.0	550	8.0	20.5	--	4.7	53	--	--
05...	1251	30.0	550	7.9	20.5	--	4.3	49	--	--
05...	1253	40.0	540	7.8	20.0	--	3.2	36	--	--
05...	1255	50.0	490	7.6	19.5	--	.9	10	--	--
05...	1257	60.0	470	7.5	19.0	--	.2	3	.497	.024
AUG										
17...	1316	1.00	434	8.4	30.5	1.65	6.7	90	--	<.010
17...	1318	10.0	438	8.3	29.5	--	6.1	81	--	--
17...	1320	20.0	439	8.2	29.5	--	5.4	72	--	--
17...	1322	30.0	449	7.4	28.0	--	.0	0	--	--
17...	1324	40.0	484	7.1	24.0	--	.0	0	--	--
17...	1326	50.0	505	7.0	21.0	--	.0	0	--	--
17...	1328	56.0	506	7.0	21.5	--	.0	0	--	<.010

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

311004097275601 - BELTON LAKE SITE GC

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB									
12...	.846	.025	.20	.23	.012	.033	.10	<10	<4.0
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	.317	.026	.20	.23	<.010	.018	.06	<10	6.7
MAY									
05...	.319	.025	.26	.29	<.010	<.010	--	<10	<4.0
05...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--
05...	.521	.106	.28	.38	.048	.054	.17	<10	376
AUG									
17...	<.050	.094	.15	.25	<.010	.016	.05	<10	<4.0
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	<.050	<.020	--	2.2	.166	.183	.56	100	431

311042097300701 - BELTON LAKE SITE HC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
FEB								
12...	1358	1.00	423	8.2	12.0	9.3	88	
12...	1400	10.0	424	8.2	12.0	9.2	87	
12...	1410	20.0	424	8.2	12.0	9.2	87	
12...	1412	30.0	422	8.2	12.0	8.8	83	
12...	1414	36.0	419	8.2	12.0	9.1	86	
MAY								
05...	1315	1.00	550	8.3	22.5	7.7	91	
05...	1317	10.0	560	8.3	22.5	7.7	91	
05...	1319	20.0	560	8.1	21.5	5.6	65	
05...	1321	30.0	600	7.7	20.5	2.6	30	
05...	1323	35.0	590	7.7	20.5	2.3	26	
AUG								
17...	1340	1.00	437	8.4	30.0	6.7	90	
17...	1342	10.0	441	8.2	29.5	5.2	69	
17...	1344	20.0	444	7.9	29.0	4.2	55	
17...	1346	32.0	447	7.7	29.0	3.1	41	

311254097291301 - BELTON LAKE SITE IC

DATE	TIME	SAM- PLING DEPTH (FEET) (00003)	SPE- CIFIC DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	TRANS- PAR- ENCY (SECCHI DISK) (M) (00078)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR PER (COLS. 100 ML) (31673)	HARD- NESS TOTAL CACO3 (MG/L) (00900)	HARD- NESS DISSOLV FLD. AS CACO3 (MG/L) (00904)
FEB													
12...	1422	1.00	472	8.4	12.5	.61	10.0	95	K6	K2	200	23	
12...	1424	10.0	474	8.4	12.5	--	9.6	92	--	--	--	--	
12...	1426	20.0	479	8.3	12.0	--	9.1	86	--	--	--	--	
12...	1428	26.0	479	8.3	12.5	--	9.5	91	--	--	200	28	
MAY													
05...	1337	1.00	590	8.3	23.5	.55	8.2	99	K1	K6	210	45	
05...	1339	10.0	595	8.2	23.0	--	7.9	94	--	--	--	--	
05...	1341	15.0	590	8.2	23.0	--	7.5	90	--	--	--	--	
05...	1343	20.0	620	7.8	22.0	--	4.3	50	--	--	--	--	
05...	1345	26.0	630	7.7	21.5	--	2.6	30	--	--	220	42	
AUG													
17...	1356	1.00	445	8.5	30.0	.88	7.3	98	0	K1	150	46	
17...	1358	10.0	449	8.1	29.5	--	5.6	74	--	--	--	--	
17...	1400	15.0	450	8.0	29.5	--	5.1	68	--	--	--	--	
17...	1402	22.0	464	7.4	29.0	--	.8	11	--	--	150	44	

BRAZOS RIVER BASIN

08102000 BELTON LAKE NEAR BELTON, TX--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

311254097291301 - BELTON LAKE SITE IC

DATE	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END CAC03 (MG/L) (39036)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
FEB											
12...	63	9.6	19	.6	3.2	170	29	26	.23	7.7	268
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	64	10	19	.6	3.3	170	30	26	.23	7.7	270
MAY											
05...	60	14	33	1	5.0	160	41	58	.29	2.9	315
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	64	15	35	1	5.1	180	42	61	.29	5.9	338
AUG											
17...	37	13	30	1	4.9	99	31	45	.28	8.3	228
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
17...	38	13	31	1	4.8	110	31	47	.30	8.9	238

311254097291301 - BELTON LAKE SITE IC

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4) (00660)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB											
12...	1.16	.029	1.19	.035	.19	.22	<.010	.016	.05	<10	<4.0
12...	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
12...	1.15	.032	1.18	.049	.18	.23	<.010	.019	.06	<10	<4.0
MAY											
05...	.155	.019	.174	.022	.36	.38	<.010	<.010	--	<10	<4.0
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--	--
05...	.108	.026	.134	.301	.34	.64	<.010	<.010	--	<10	322
AUG											
17...	--	<.010	<.050	.056	.22	.27	<.010	.015	.05	<10	<4.0
17...	--	--	--	--	--	--	--	--	--	--	--
17...	--	<.010	<.050	.056	.21	.26	<.010	.013	.04	<10	<4.0
17...	--	.010	<.050	.175	.27	.45	.012	.022	.07	<10	174

08102000 BELTON LAKE NEAR BELTON, TX--Continued

Belton Lake Site AC (310640097283701)

Phytoplankton Analyses October 1997 to September 1998

Date	2-12-98
Time	1000
<hr/>	
TOTAL CELLS/mL	6,598
NUMBER OF SPECIES	5
DEPTH COLLECTED (ft.)	1.85

Organisms	Cells/mL
CHLOROPHYTA	
<i>Chlamydomonas</i> sp.	300
<i>Selenastrum Westii</i>	750
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	5,398
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	120
PYRRHOPHYTA	
<i>Ceratium hirundinella</i>	30

Belton Lake Site DC (310923097332601)

Phytoplankton Analyses October 1997 to September 1998

Date	2-12-98
Time	1154
<hr/>	
TOTAL CELLS/mL	3,839
NUMBER OF SPECIES	5
DEPTH COLLECTED (ft.)	0.75

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	60
Order Pennales	
<i>Synedra ulna</i> var <i>ulna</i>	120
CHLOROPHYTA	
<i>Chlamydomonas</i> sp.	30
<i>Micractinium pusillum</i> .	30
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	3,599

BRAZOS RIVER BASIN

08102000 BELTON LAKE NEAR BELTON, TX--Continued

Belton Lake Site IC (311254097291301)

Phytoplankton Analyses October 1997 to September 1998

Date	2-12-98
Time	1422

TOTAL CELLS/mL	6,748
NUMBER OF SPECIES	8
DEPTH COLLECTED (ft.)	1.0

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	30
Order Pennales	
<i>Synedra ulna var ulna</i>	60
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	240
<i>Chlamydomonas sp.</i>	1,140
<i>Micractinium pusillum.</i>	90
<i>Selenastrum Westii</i>	210
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	4,798
EUGLENOPHYTA	
<i>Trachelomonas sp.</i>	180

Belton Lake Site AC (310640097283701)

Phytoplankton Analyses October 1997 to September 1998

Date	5/5/98
Time	855

TOTAL CELLS/mL	4,589
NUMBER OF SPECIES	10
DEPTH COLLECTED (ft.)	3.0

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	480
Order Pennales	
<i>Cymbella minuta var. minuta</i>	120
CHLOROPHYTA	
<i>Chlamydomonas sp.</i>	120
<i>Coelastrum microporum</i>	30
<i>Crucigenia tetrapedia</i>	120
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	2,999
<i>Chroococcus limneticus</i>	360
EUGLENOPHYTA	
<i>Trachelomonas sp.</i>	150
PYRRHOPHYTA	
<i>Ceratium hirundinella</i>	30
CRYPTOPHYTA	
<i>Cryptomonas erosa</i>	180

08102000 BELTON LAKE NEAR BELTON, TX--Continued

Belton Lake Site DC (310923097332601)

Phytoplankton Analyses October 1997 to September 1998

Date	5/5/98
Time	1110
<hr/>	
TOTAL CELLS/mL	3,209
NUMBER OF SPECIES	6
DEPTH COLLECTED (ft.)	1.5

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	30
Order Pennales	
<i>Nitzschia palea</i> var. <i>palea</i>	90
CHLOROPHYTA	
<i>Chlamydomonas</i> sp.	30
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	2,999
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	30
CRYPTOPHYTA	
<i>Cryptomonas erosa</i>	30

Belton Lake Site IC (311254097291301)

Phytoplankton Analyses October 1997 to September 1998

Date	5/5/98
Time	1337
<hr/>	
TOTAL CELLS/mL	11,577
NUMBER OF SPECIES	17
DEPTH COLLECTED (ft.)	0.9

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	1,050
Order Pennales	
<i>Nitzschia palea</i> var. <i>palea</i>	40
<i>Synedra ulna</i> var. <i>ulna</i>	80
CHLOROPHYTA	
<i>Chlamydomonas</i> sp.	210
<i>Coelastrum microporum</i>	240
<i>Cosmarium</i> sp.	30
<i>Crucigenia tetrapedia</i>	120
<i>Oocystis</i> sp.	60
<i>Pediastrum duplex</i>	30
<i>Scenedesmus acuminatus</i>	120
<i>Scenedesmus opoliensis</i>	300
<i>Scenedesmus quadracauda</i>	30
<i>Selenastrum Westii</i>	90
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	7,198
<i>Aphanocapsa elachista</i>	1,799
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	90
CRYPTOPHYTA	
<i>Cryptomonas erosa</i>	90

BRAZOS RIVER BASIN

08102000 BELTON LAKE NEAR BELTON, TX--Continued

Belton Lake Site IC (311254097291301)

Phytoplankton Analyses October 1997 to September 1998

Date	8/17/98
Time	1356
TOTAL CELLS/mL	34,519
NUMBER OF SPECIES	16
DEPTH COLLECTED (ft.)	1.45
Organisms	Cells/mL
BACILLARIOPHYTA	
Order Centrales	
<i>Cyclotella ocellata</i>	60
Order Pennales	
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>	870
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	1,410
<i>Chlamydomonas</i> sp.	30
<i>Cosmarium</i> sp.	30
<i>Crucigenia tetrapedia</i>	120
<i>Pediastrum duplex</i>	30
<i>Scenedesmus opoliensis</i>	90
<i>Staurastrum</i> sp.	30
<i>Tetrastrum punctatum</i>	30
CYANOPHYTA	
<i>Anabaena</i> sp.	180
<i>Aphanocapsa delicatissima</i>	10,796
<i>Chroococcus limneticus</i>	2,519
<i>Merismopedia tenuissima</i>	7,917
<i>Oscillatoria</i> sp.	9,597
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	810

Belton Lake Site AC (310640097283701)

Phytoplankton Analyses October 1997 to September 1998

Date	8/17/98
Time	938
TOTAL CELLS/mL	45,675
NUMBER OF SPECIES	10
DEPTH COLLECTED (ft.)	3.8
Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>	1,919
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	480
<i>Cosmarium</i> sp.	60
<i>Mougeotia</i> sp.	480
<i>Selenastrum Westii</i>	30
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	27,591
<i>Aphanocapsa elachista</i>	1,799
<i>Chroococcus limneticus</i>	600
<i>Oscillatoria</i> sp.	12,596
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	120

08102000 BELTON LAKE NEAR BELTON, TX--Continued

Belton Lake Site DC (310923097332601)

Phytoplankton Analyses October 1997 to September 1998

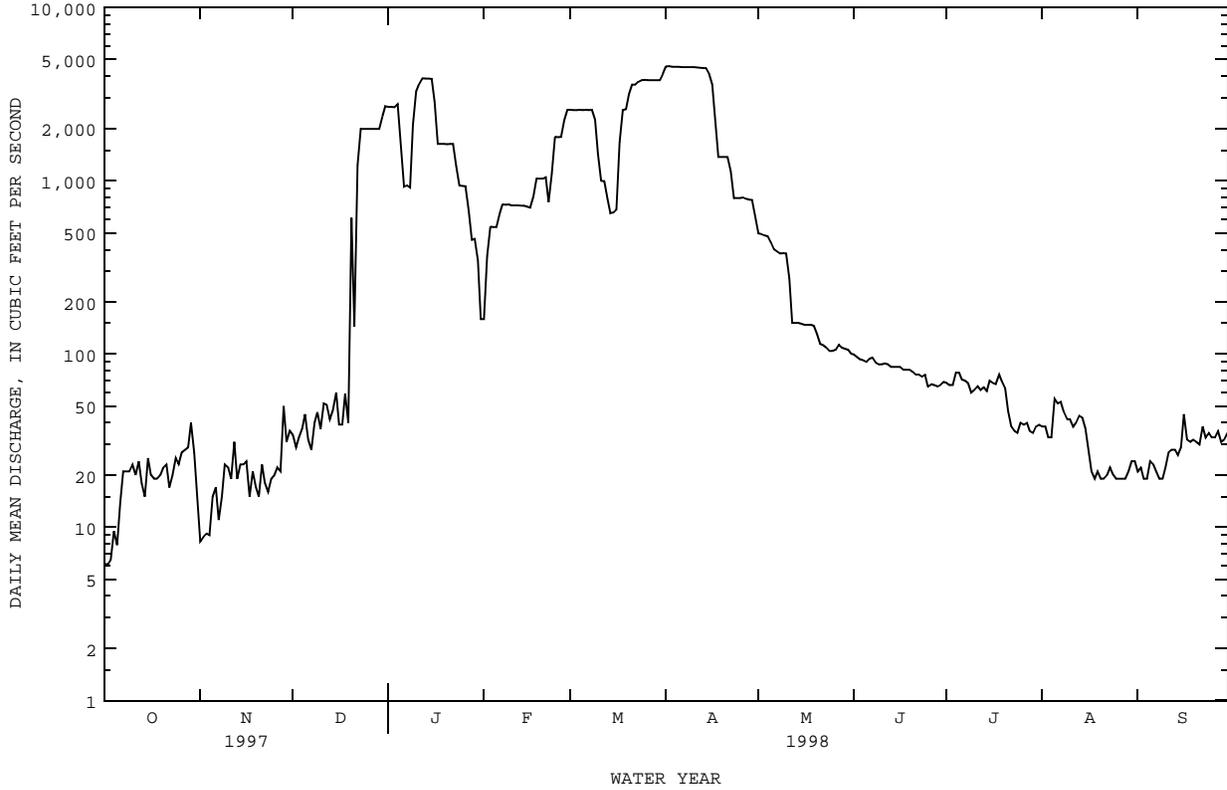
Date	8/17/98
Time	1146
<hr/>	
TOTAL CELLS/mL	26,722
NUMBER OF SPECIES	11
DEPTH COLLECTED (ft.)	1.7
<hr/>	

Organisms	Cells/mL
BACILLARIOPHYTA	
Order Pennales	
<i>Fragilaria crotonensis</i> var. <i>crotonensis</i>	1,050
CHLOROPHYTA	
<i>Ankistrodesmus falcatus</i>	540
<i>Cosmarium</i> sp.	30
<i>Staurastrum</i> sp.	30
<i>Tetrastrum punctatum</i>	30
CYANOPHYTA	
<i>Aphanocapsa delicatissima</i>	12,596
<i>Aphanocapsa elachista</i>	600
<i>Chroococcus limneticus</i>	360
<i>Merismopedia tenuissima</i>	600
<i>Oscillatoria</i> sp.	10,796
EUGLENOPHYTA	
<i>Trachelomonas</i> sp.	90
<hr/>	

08102500 LEON RIVER NEAR BELTON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998z	
ANNUAL TOTAL	763660.3		288050.4		601	
ANNUAL MEAN	2092		789		4.71	
HIGHEST ANNUAL MEAN					3067 1992	
LOWEST ANNUAL MEAN					1955	
HIGHEST DAILY MEAN	7070	Mar 8	4570	Apr 2	10200	Mar 6 1992
LOWEST DAILY MEAN	5.5	Sep 18	6.1	Oct 1	.00	Oct 1 1953
ANNUAL SEVEN-DAY MINIMUM	7.0	Sep 27	10	Oct 1	.00	Oct 1 1953
INSTANTANEOUS PEAK FLOW			4570	Apr 1	56500	Apr 22 1945
INSTANTANEOUS PEAK STAGE			7.42	Apr 1	24.41	Apr 22 1945
ANNUAL RUNOFF (AC-FT)	1515000		571300		435600	
10 PERCENT EXCEEDS	4450		2720		2200	
50 PERCENT EXCEEDS	1120		79		42	
90 PERCENT EXCEEDS	17		19		4.7	

z Period of regulated streamflow.



BRAZOS RIVER BASIN

08102500 LEON RIVER NEAR BELTON, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biochemical analyses: Mar 1961 to Aug 1964; Jan 1994 to current year. Water temperature: Mar 1957 to Oct 1972; recorded continuously from Mar 1957 to Sep 1964.

REMARKS.--Samples collected by USGS personnel.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

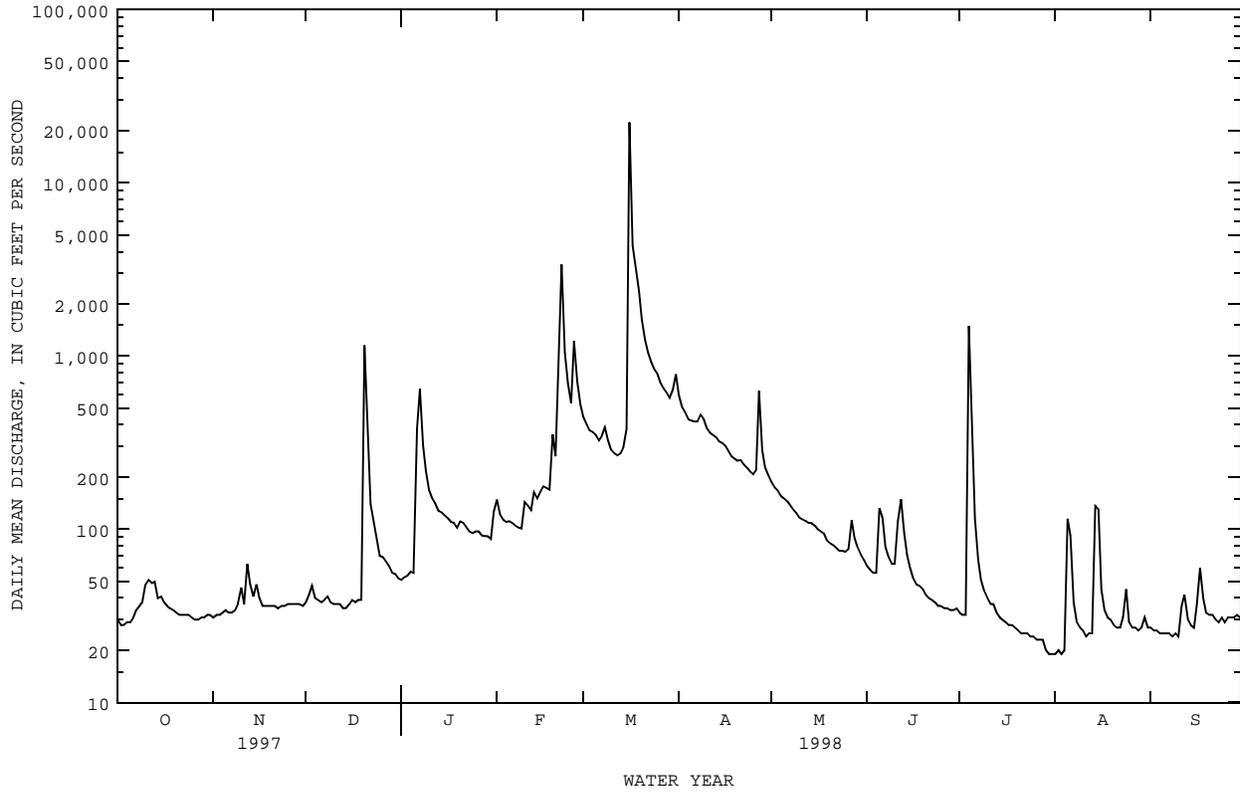
DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) (00310)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)
FEB 12...	1050	723	449	8.0	11.5	10	5.9	11.2	104	.1	170
MAY 05...	1245	417	438	7.8	17.0	16	6.4	10.4	110	.9	180
AUG 17...	1200	21	451	7.0	22.0	15	1.8	9.2	107	.5	180
DATE	HARD-NESS NONCARB DISSOLV FLD. AS CaCO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)
FEB 12...	42	50	12	26	.8	4.2	130	28	41	.24	7.1
MAY 05...	41	56	9.8	18	.6	3.5	140	24	26	.26	8.1
AUG 17...	20	55	10	18	.6	3.4	160	21	27	.25	9.7
DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDEDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDEDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
FEB 12...	250	11	3	8	--	<.010	.388	.033	.20	.23	<.010
MAY 05...	234	5	6	.00	--	<.010	.826	.022	.22	.25	<.010
AUG 17...	244	2	1	1	.445	.029	.474	.114	.21	.32	.013
DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
FEB 12...	.017	.05	4.8	2	68	<1.0	<8.0	<14	<12	<10	<10
MAY 05...	.016	.05	3.5	2	66	<1.0	<8.0	<14	<12	<10	<10
AUG 17...	.019	.06	3.5	4	64	<1.0	<8.0	<14	<12	<10	<10
DATE	LEAD, DIS-SOLVED (UG/L AS Pb) (01049)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS Hg) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
FEB 12...	<100	8	<4.0	<.1	<60	<40	<1	<4.0	381	<10	<20
MAY 05...	<100	6	5.3	<.1	<60	<40	<1	<4.0	374	<10	<20
AUG 17...	<100	6	12	<.1	<60	<40	<1	<4.0	383	<10	<20

BRAZOS RIVER BASIN

08103800 LAMPASAS RIVER NEAR KEMPNER, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1974 - 1998z	
ANNUAL TOTAL	246880		89834		168	
ANNUAL MEAN	676		246		949	
HIGHEST ANNUAL MEAN					10.7	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	19400	Feb 20	22300	Mar 16	42500	Dec 21 1991
LOWEST DAILY MEAN	28	Oct 2	19	Jul 30	2.0	Jul 10 1984
ANNUAL SEVEN-DAY MINIMUM	29	Sep 29	19	Jul 29	2.9	Jul 9 1984
INSTANTANEOUS PEAK FLOW			52700	Mar 16	78000	Dec 20 1991
INSTANTANEOUS PEAK STAGE			30.59	Mar 16	35.00	Dec 20 1991
ANNUAL RUNOFF (AC-FT)	489700		178200		121600	
10 PERCENT EXCEEDS	1650		426		310	
50 PERCENT EXCEEDS	140		56		32	
90 PERCENT EXCEEDS	34		27		12	

z Period of regulated streamflow.



BRAZOS RIVER BASIN

08104050 STILLHOUSE HOLLOW LAKE NEAR BELTON, TX

LOCATION.--Lat 31°01'20", long 97°31'57", Bell County, Hydrologic Unit 12070203, in intake structure at Stillhouse Hollow Dam on Lampasas River, 5 mi southwest of Belton, and 16.0 mi upstream from mouth.

DRAINAGE AREA.--1,313 mi².

WATER-CONTENT RECORDS

PERIOD OF RECORD.--Sep 1966 to current year. Prior to Oct 1970, published as Stillhouse Hollow Reservoir.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 15,624 ft long, including a 1,650-foot spillway and 5,894-foot dike. The lake was operated as a temporary detention basin from Sep 2, 1966 to Feb 19, 1968. Deliberate impoundment began Feb 19, 1968. The lake was built for flood control and water conservation. The spillway is an uncontrolled broad-crested weir 1,650 ft long located near right end of dam. The flood-control outlet consists of a 12.0-foot-diameter conduit controlled by two 5.67- by 12.0-foot slide gates at an invert elevation of 515.0 ft. There are many small diversions upstream for irrigation, municipal supply and for oil field operations. For statement regarding regulation by National Resource Conservation Service floodwater-retarding structures, see station 08103800. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	698.0
Design flood.....	693.2
Crest of spillway.....	666.0
Top of conservation pool.....	622.0
Lowest gated outlet (invert).....	515.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by Texas Water Development Board, was put into use beginning Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 654,000 acre-ft, Mar 4, 1992 (elevation, 667.97 ft); minimum since conservation storage was reached on Apr 12, 1969, 172,700 acre-ft, Aug 23, 1996 (elevation, 612.8 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 284,200 acre-ft, Mar 19 (elevation, 630.41 ft); minimum daily contents, 213,200 acre-ft, Sep 10 (elevation, 619.94 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224900	224700	227800	251300	230300	246700	271100	229400	230900	228500	222000	216200
2	224900	224600	227800	249400	230500	246100	270300	229500	230900	228200	221600	215900
3	224700	224400	227400	247500	230100	245300	269300	229600	230800	227900	221200	215700
4	224600	224400	227100	247000	229600	244600	268200	229600	230800	228700	220900	215300
5	224500	224300	227000	246600	229300	243800	267100	229600	231000	230100	220600	215000
6	224500	224200	226900	249000	228600	242800	266000	229600	231000	230200	220900	214700
7	224900	224100	227100	257300	227700	241900	265000	229600	231100	230100	221100	214400
8	224900	224000	227100	259700	226900	241000	264100	229500	231100	229900	220900	214000
9	225300	224700	227000	260100	226500	239400	263100	229300	231100	229600	220700	213700
10	225400	224700	226700	259300	227700	237400	261700	229100	231200	229300	220400	213200
11	226200	224900	226400	258400	228000	235300	260400	228900	231700	229100	220100	214000
12	226500	225800	226400	257200	227700	233200	258900	228900	231900	228800	219800	214400
13	226400	226100	226300	255900	227800	231600	257500	228900	232100	228500	219500	214400
14	226300	226200	226300	254500	228400	230500	256100	229000	232200	228300	219800	214400
15	226200	226600	226300	253100	228900	229600	254200	229100	232200	228000	219700	214400
16	226100	226600	226400	251500	229800	263600	251500	229100	232100	227800	219600	215900
17	226000	226600	226400	249800	230000	281400	248200	229100	232100	227400	219400	216000
18	226000	226700	226500	248100	230200	283700	244900	229100	232000	227200	219400	216100
19	225900	226700	226500	246300	231400	284200	241500	229100	231900	226800	219300	216200
20	225800	226800	245900	244600	231000	284100	238200	229300	231800	226500	219000	216200
21	225800	226900	263500	242900	231500	283900	235100	229300	231700	226200	218700	216200
22	225600	226900	264100	241000	241100	283400	231700	229400	231500	225700	218400	216200
23	225600	226900	263800	239200	243600	282500	229600	229500	231100	225500	218200	216200
24	225500	226900	263100	237200	244100	281400	229100	229600	230600	225100	218000	216100
25	225500	227100	262000	235300	244600	280100	228800	229600	230200	224700	217800	216100
26	225100	227100	261100	233400	246600	278700	229200	229800	230000	224200	217500	216100
27	225000	227300	259900	231300	247300	277100	229600	230400	229600	223900	217300	216100
28	224800	228000	258600	229400	247200	275400	229800	230700	229400	223500	217100	216000
29	224800	228000	257200	228100	---	273600	229700	230800	229100	223100	216900	216000
30	224800	228000	255500	227600	---	272100	229500	230900	228800	222600	216800	216000
31	224800	---	253400	228500	---	271600	---	230900	---	222300	216500	---
MAX	226500	228000	264100	260100	247300	284200	271100	230900	232200	230200	222000	216200
MIN	224500	224000	226300	227600	226500	229600	228800	228900	228800	222300	216500	213200
(+)	621.80	622.30	626.12	622.38	625.21	628.69	622.54	622.75	622.43	621.41	620.48	620.40
(@)	-100	+3200	+25400	-24900	+18700	+24400	-42100	+1400	-2100	-6500	-5800	-500
CAL YR 1997	MAX 358700	MIN 212600	(@) +41200									
WTR YR 1998	MAX 284200	MIN 213200	(@) -8900									

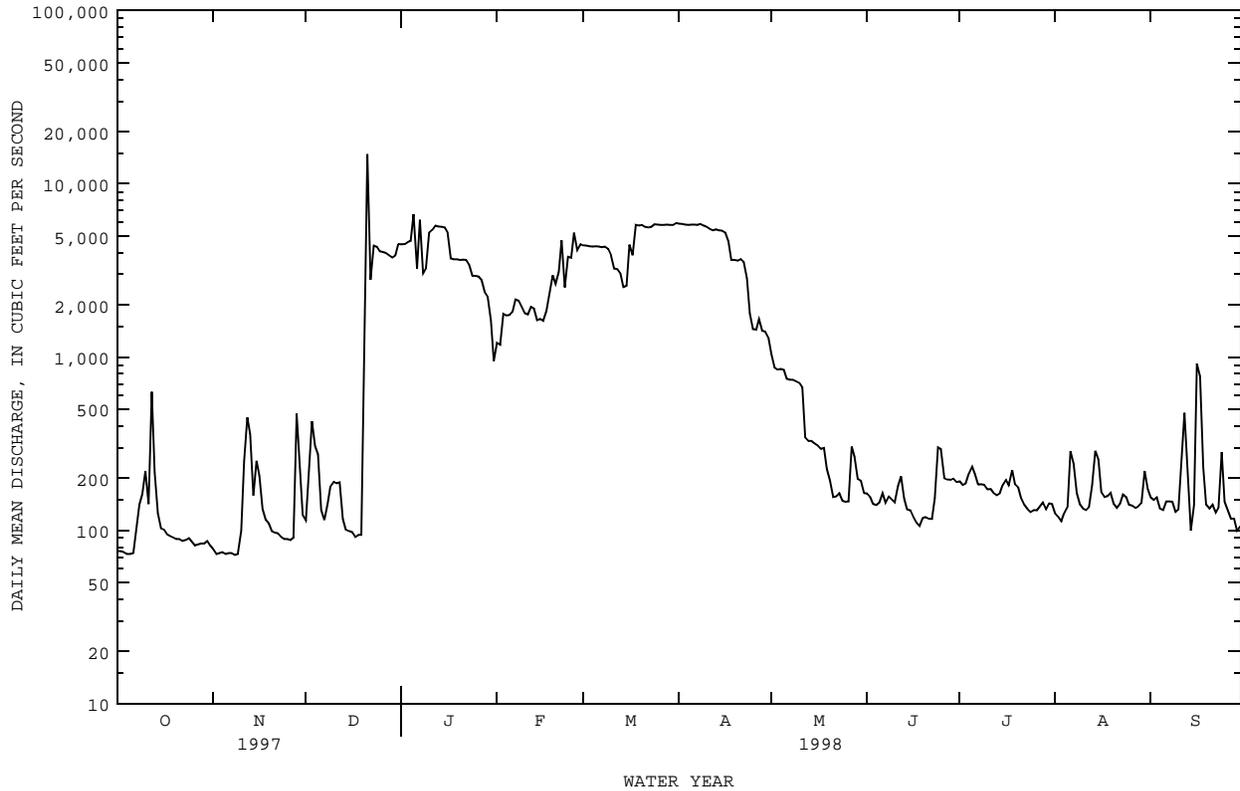
(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08104500 LITTLE RIVER NEAR LITTLE RIVER, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998z	
ANNUAL TOTAL	1230033		568339		1055	
ANNUAL MEAN	3370		1557		5054	
HIGHEST ANNUAL MEAN					179	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	14800	Apr 4	14800	Dec 21	62000	May 17 1965
LOWEST DAILY MEAN	72	Nov 8	72	Nov 8	8.2	Aug 6 1963
ANNUAL SEVEN-DAY MINIMUM	74	Nov 2	74	Nov 2	9.5	Aug 3 1963
INSTANTANEOUS PEAK FLOW			21200	Dec 21	79600	May 17 1965
INSTANTANEOUS PEAK STAGE			38.09	Dec 21	42.85	May 17 1965
ANNUAL RUNOFF (AC-FT)	2440000		1127000		764400	
10 PERCENT EXCEEDS	7550		5370		3320	
50 PERCENT EXCEEDS	2200		214		268	
90 PERCENT EXCEEDS	89		94		64	

e Estimated
z Period of regulated streamflow.



08104650 LAKE GEORGETOWN NEAR GEORGETOWN, TX

LOCATION.--Lat 30°40'03", long 97°43'38", Williamson County, Hydrologic Unit 12070205, at North San Gabriel Dam, on North Fork San Gabriel River, 2.5 mi upstream from Middle Fork San Gabriel River, 3.7 mi northwest of Georgetown, and 4.4 mi upstream from confluence with South Fork San Gabriel River.

DRAINAGE AREA.--247 mi².

PERIOD OF RECORD.--Mar 1980 to current year.

Water-quality records.--Chemical and biochemical analyses: Oct 1980 to Aug 1989.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Prior to May 13, 1980, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam, 6,700 ft long, including the spillway. The lake was built for water conservation and flood control. Deliberate impoundment began on Mar 3, 1980. The spillway is an ungated broad-crested weir 1,000 ft long, located near right end of dam. The spillway for normal flood releases is a gated, 11-foot-diameter conduit, controlled by two 5- by 11 foot slide gates, located near the center of dam. The invert for the floodgate is 720.0 ft. A low-flow outlet, consisting of four 3- by 4-foot gates is located near the center of dam. The inverts of these gates are 735.0, 749.0, 763.0, and 777.0 ft. Figures given herein represent total content. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam.....	861.0
Design flood.....	856.2
Crest of spillway.....	834.0
Top of conservation pool.....	791.0
Lowest gated outlet (invert of 11-foot conduit).....	720.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 136,900 acre-ft, Mar 4, 1992 (elevation, 835.86 ft); minimum, 466 acre-ft, Mar 4, 1980 (elevation, 724.46 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 45,270 acre-ft, Dec 26 (elevation, 796.80 ft); minimum daily contents, 28,040 acre-ft, Sep 30 (elevation, 783.49 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33910	32890	32290	43170	39510	41470	38630	37210	36720	34670	32130	29520
2	33850	32840	32310	42710	39380	40170	37990	37240	36640	34640	32030	29440
3	33760	32840	32300	42110	38920	38530	37510	37240	36570	34490	31910	29360
4	33700	32730	32280	41660	38430	37690	37440	37270	36500	34610	31810	29280
5	33640	32690	32260	41160	37950	37340	37450	37270	36520	34650	31730	29190
6	33570	32630	32230	41360	37620	37280	37460	37280	36460	34620	31680	29100
7	33590	32590	32220	42690	37410	37250	37340	37270	36390	34550	31590	29010
8	33580	32530	32220	42740	37290	37270	37410	37240	36320	34490	31510	28920
9	33590	32620	32180	42550	37320	37170	37250	37240	36260	34400	31400	28830
10	33620	32600	32160	41970	37870	37150	37150	37230	36210	34320	31290	28730
11	33770	32590	32110	41180	37960	37240	37320	37200	36260	34230	31190	28800
12	33840	32610	32070	40370	37840	37210	37490	37190	36220	34130	31100	28770
13	33790	32620	32050	39510	37740	37120	37550	37190	36180	34040	30990	28710
14	33740	32600	32030	38840	37660	37270	37510	37170	36120	34020	30930	28670
15	33690	32600	32000	38430	37660	37510	37460	37170	36060	33910	30840	28610
16	33640	32570	31980	38300	37610	45150	37380	37160	35980	33810	30750	28660
17	33600	32550	31950	38340	37510	45160	37290	37150	35880	33740	30660	28620
18	33550	32530	31930	38360	37410	43130	37170	37140	35800	33680	30580	28590
19	33510	32500	31910	38380	37610	40950	37060	37080	35710	33580	30530	28540
20	33460	32530	37540	38160	37120	39580	37070	37040	35610	33480	30430	28510
21	33410	32450	43360	37710	37650	38930	37200	37010	35510	33380	30350	28470
22	33360	32430	43880	37230	40400	38500	37330	36980	35440	33270	30300	28480
23	33320	32410	44320	37120	40970	38020	37400	36920	35340	33180	30240	28440
24	33270	32370	44680	37320	41110	37690	37340	36890	35240	33060	30170	28350
25	33230	32360	44960	37400	41340	37590	37280	36850	35150	32940	30100	28290
26	33130	32350	45270	37190	42460	37460	37270	36820	35100	32830	30020	28250
27	33080	32320	45210	37120	42360	37340	37230	36890	34950	32710	29990	28190
28	33030	32380	44920	37160	42000	37170	37150	36890	34850	32600	29880	28140
29	32980	32410	44590	37080	---	37320	37140	36880	34820	32480	29750	28140
30	32970	32310	44260	37140	---	37870	37170	36820	34760	32360	29690	28040
31	32950	---	43760	38390	---	38620	---	36770	---	32280	29610	---
MAX	33910	32890	45270	43170	42460	45160	38630	37280	36720	34670	32130	29520
MIN	32950	32310	31910	37080	37120	37120	37060	36770	34760	32280	29610	28040
(+)	787.75	787.22	795.79	792.00	794.58	792.17	791.09	790.79	789.23	787.20	784.90	783.49
(@)	-1010	-640	+11450	-5370	+3610	-3380	-1450	-400	-2010	-2480	-2670	-1570

CAL YR 1997 MAX 50010 MIN 26840 (@) +17050
WTR YR 1998 MAX 45270 MIN 28040 (@) -5920

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08104700 NORTH FORK SAN GABRIEL RIVER NEAR GEORGETOWN, TX

LOCATION.--Lat 30°39'42", long 97°42'40", Williamson County, Hydrologic Unit 12070205, on left bank 5,000 ft downstream from North Fork dam, 1.5 mi upstream from Middle Fork San Gabriel River, 2.7 mi upstream from Interstate Highway 35, 2.7 mi northwest of Georgetown, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--248 mi².

PERIOD OF RECORD.--Jun 1968 to current year.

Water-quality records.--Chemical and biochemical analyses: Oct 1980 to Aug 1989.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 689.06 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since 1980, at least 10% of contributing drainage area has been regulated by Lake Georgetown (station 08104650) located about 1.0 mi upstream from gage. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--11 years (water years 1969-79), 88.1 ft³/s (63,830 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1969-79).--Maximum discharge, 35,000 ft³/s Sep 17, 1974 (gage height, 26.20 ft); no flow Jul 23-25, 1971.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 39.5 ft in Sep 1921. Flood in Apr 1957 reached a stage of 34.5 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.5	4.8	389	85	507	184	35	5.8	3.9	4.9	5.3
2	3.3	3.4	4.9	389	312	1030	476	36	5.8	3.8	5.1	5.1
3	3.5	3.2	4.9	389	414	1220	391	36	6.0	3.8	5.4	4.7
4	3.4	3.2	4.6	390	411	732	193	36	6.1	4.0	6.1	4.2
5	3.3	3.5	4.5	389	409	388	148	36	8.5	4.0	5.6	4.5
6	3.4	3.4	4.4	397	324	260	146	36	7.0	3.8	5.8	4.4
7	3.7	3.4	4.4	395	248	262	219	36	6.6	3.6	5.8	4.8
8	3.9	3.3	4.2	391	208	263	264	28	6.5	3.7	5.7	4.7
9	4.1	4.0	4.2	389	130	261	268	11	6.3	3.6	5.5	4.5
10	4.0	4.6	4.2	556	132	189	187	11	6.2	3.5	5.5	4.3
11	e5.0	3.9	4.3	650	192	143	42	11	6.6	3.1	5.2	6.8
12	e4.0	4.6	4.3	636	247	201	42	10	6.1	2.8	4.6	6.1
13	e3.5	4.7	4.2	625	247	223	97	6.8	5.7	2.4	5.1	5.8
14	3.2	4.1	4.1	526	250	144	148	6.8	5.8	2.6	5.7	5.5
15	2.9	4.4	4.2	371	251	146	148	6.8	5.4	2.9	5.6	5.6
16	2.8	4.2	4.1	233	251	156	149	6.6	5.4	3.3	5.8	6.2
17	2.7	4.6	4.1	133	251	752	148	6.8	5.3	3.5	6.1	6.1
18	2.8	4.7	4.2	133	251	1810	149	6.6	5.3	4.1	5.6	6.0
19	2.7	4.2	4.3	132	249	1780	148	6.3	5.1	3.7	5.5	6.2
20	2.8	5.0	11	237	465	1170	69	6.2	5.0	3.4	5.2	6.2
21	2.8	5.5	7.7	359	311	578	11	6.2	4.4	1.9	4.6	6.1
22	2.7	5.8	3.8	357	12	485	11	6.1	4.5	2.4	5.0	5.1
23	2.8	5.8	3.4	169	134	483	40	6.0	4.6	3.7	5.1	5.1
24	2.7	5.9	3.1	16	277	412	103	6.1	4.6	4.8	5.1	4.5
25	2.7	5.9	2.9	80	277	291	104	6.6	4.5	4.9	5.2	4.2
26	2.6	6.6	2.9	212	277	294	104	6.6	4.5	4.6	5.2	4.0
27	2.7	6.5	169	132	419	291	104	7.1	3.8	4.5	5.1	4.0
28	2.7	6.6	289	88	510	288	104	6.5	3.7	4.6	5.2	4.3
29	2.8	5.7	281	142	---	128	64	6.2	4.8	5.7	5.6	4.5
30	3.0	5.1	280	73	---	12	35	6.1	4.5	5.7	5.8	4.3
31	3.4	---	347	23	---	4.0	---	6.0	---	6.0	5.3	---
TOTAL	99.3	139.3	1483.7	9401	7544	14903.0	4296	444.4	164.4	118.3	167.0	153.1
MEAN	3.20	4.64	47.9	303	269	481	143	14.3	5.48	3.82	5.39	5.10
MAX	5.0	6.6	347	650	510	1810	476	36	8.5	6.0	6.1	6.8
MIN	2.6	3.2	2.9	16	12	4.0	11	6.0	3.7	1.9	4.6	4.0
AC-FT	197	276	2940	18650	14960	29560	8520	881	326	235	331	304

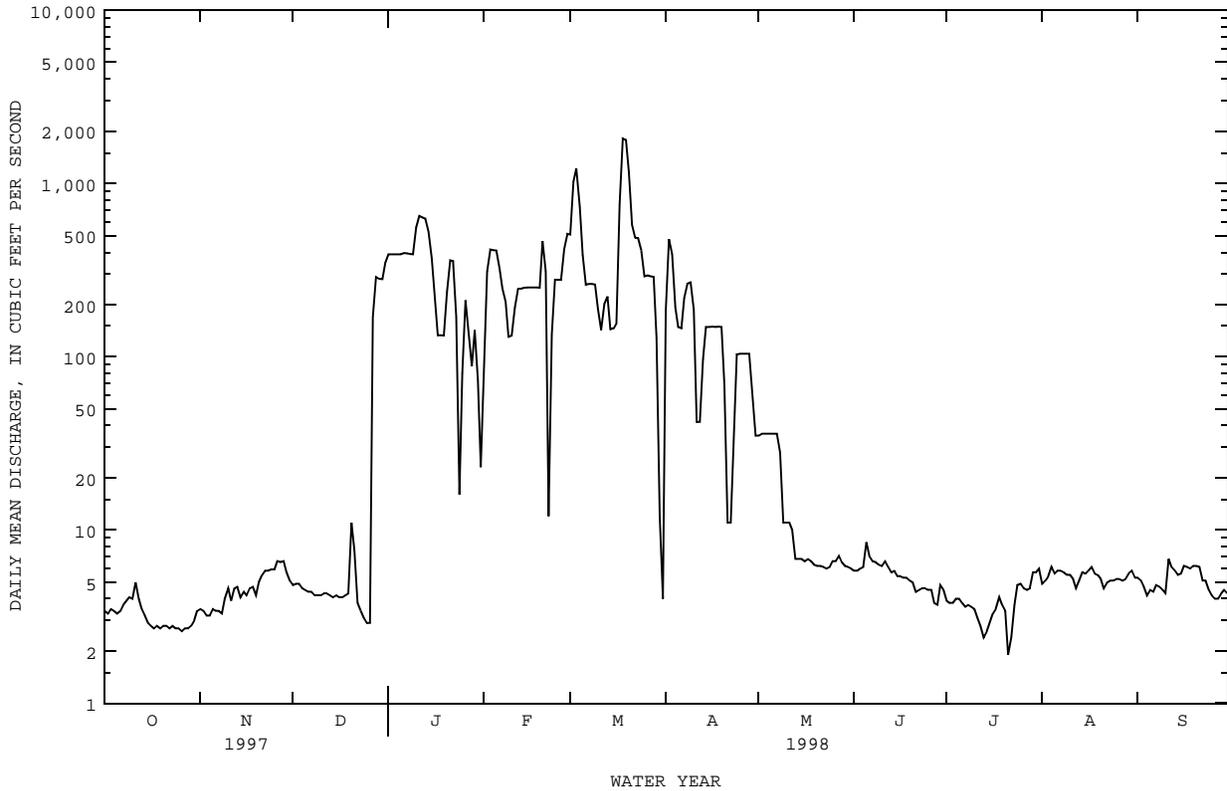
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998z, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	15.4	20.2	41.9	58.8	90.5	146	84.5	103	170	154	8.64	31.5							
MAX	153	171	254	343	485	832	574	544	938	962	27.2	461							
(WY)	1982	1982	1986	1992	1986	1992	1992	1997	1992	1987	1992	1981							
MIN	1.18	1.72	1.97	1.39	4.06	1.30	.44	.71	.60	2.12	1.30	1.37							
(WY)	1983	1986	1984	1986	1990	1980	1980	1980	1980	1996	1982	1982							

08104700 NORTH FORK SAN GABRIEL RIVER NEAR GEORGETOWN, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1980 - 1998z	
ANNUAL TOTAL	64304.78	38913.5	76.9	
ANNUAL MEAN	176	107	358	1992
HIGHEST ANNUAL MEAN			4.00	1980
LOWEST ANNUAL MEAN			4500	Jun 9 1981
HIGHEST DAILY MEAN	1180 Jun 26	1810 Mar 18	.00	Sep 27 1981
LOWEST DAILY MEAN	.98 Feb 11	1.9 Jul 21	.01	Oct 2 1981
ANNUAL SEVEN-DAY MINIMUM	1.6 Feb 5	2.7 Oct 22	3500	Sep 17 1974
INSTANTANEOUS PEAK FLOW		1860 Mar 17	26.20	Sep 17 1974
INSTANTANEOUS PEAK STAGE		9.24 Mar 17	55710	
ANNUAL RUNOFF (AC-FT)	127500	77180	185	
10 PERCENT EXCEEDS	577	364	6.6	
50 PERCENT EXCEEDS	8.7	5.9	2.1	
90 PERCENT EXCEEDS	3.2	3.4		

e Estimated
z Period of regulated streamflow.



BRAZOS RIVER BASIN

08104900 SOUTH FORK SAN GABRIEL RIVER AT GEORGETOWN, TX

LOCATION.--Lat 30°37'32", long 97°41'27", Williamson County, Hydrologic Unit 12070205, on right bank at downstream side of downstream bridge of two bridges on Interstate Highway 35, 1.1 mi southwest of the courthouse at Georgetown, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--133 mi².

PERIOD OF RECORD.--Oct 1947 to Sep 1948 (daily mean discharge), Sep 1962 to Oct 1967 (occasional low-flow measurements), Dec 1967 to current year.

REVISED RECORDS.--WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 687.72 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. No known regulation or diversions. Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1887, about 41 ft Apr 24, 1957, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 20	2300	5,400	10.68	Mar 16	1045	5,600	10.85

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.4	1.8	41	290	140	136	49	9.5	.45	.05	.07
2	1.6	2.7	2.1	42	98	130	122	47	6.2	.39	.05	.12
3	1.4	2.4	2.5	42	76	124	113	45	5.8	.37	.05	.12
4	1.5	1.9	2.0	43	69	124	92	43	5.3	196	.05	.13
5	1.6	1.9	1.9	45	71	121	86	40	14	64	.05	.13
6	1.3	1.4	1.9	88	68	112	81	38	16	19	.06	.14
7	1.5	1.2	2.0	388	63	114	78	34	8.6	6.1	.07	.15
8	2.0	.96	2.0	139	64	132	115	32	7.4	2.0	.08	.10
9	2.4	2.6	1.8	101	60	115	106	32	3.9	1.4	.07	.07
10	2.6	4.3	1.7	86	81	105	88	32	4.5	.95	.07	.07
11	27	3.2	1.5	80	80	102	85	30	9.1	.85	.06	1.3
12	16	4.5	1.2	79	65	99	82	27	11	.65	.07	.58
13	8.0	4.1	1.5	74	67	100	75	26	9.6	.92	.07	.40
14	5.6	3.7	1.6	69	71	103	72	27	7.7	.45	.11	.75
15	4.1	3.4	1.6	66	89	115	72	25	5.4	.22	.09	1.8
16	3.8	2.9	1.3	63	87	1580	69	22	2.2	.29	.07	.76
17	3.6	2.6	1.2	61	82	342	64	24	2.1	.99	.07	.36
18	4.0	2.5	1.4	61	75	227	63	23	1.7	.46	.09	.19
19	4.5	2.3	1.3	56	106	190	64	18	1.4	.70	.12	.16
20	5.1	2.2	613	55	92	165	60	17	1.1	.50	.09	.18
21	4.7	2.2	1120	54	125	159	62	14	1.3	.27	.07	.17
22	4.4	2.1	113	53	559	151	58	14	1.5	.16	.07	.18
23	4.9	2.3	72	48	174	143	56	14	.69	.13	.16	.17
24	3.9	2.3	66	47	140	130	54	15	.44	.07	.21	.23
25	1.9	2.2	56	49	124	130	52	14	.45	.07	.15	.21
26	2.3	2.1	53	49	468	124	54	13	.39	.07	.14	.22
27	2.2	2.1	55	46	185	123	64	18	.34	.07	.14	.23
28	2.0	6.0	51	43	149	119	56	25	.36	.07	.13	.27
29	1.8	2.2	46	42	---	113	51	16	.82	.07	.14	.25
30	1.8	2.0	44	39	---	112	49	11	.83	.07	.30	.23
31	2.0	---	42	206	---	237	---	12	---	.06	.10	---
TOTAL	131.4	78.66	2363.3	2355	3678	5781	2279	797	139.62	297.80	3.05	9.74
MEAN	4.24	2.62	76.2	76.0	131	186	76.0	25.7	4.65	9.61	.098	.32
MAX	27	6.0	1120	388	559	1580	136	49	16	196	.30	1.8
MIN	1.3	.96	1.2	39	60	99	49	11	.34	.06	.05	.07
AC-FT	261	156	4690	4670	7300	11470	4520	1580	277	591	6.0	19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1998, BY WATER YEAR (WY)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	
MEAN	35.2	20.0	47.5	51.8	80.0	68.0	75.9	101	123	25.2	13.7	22.8										
MAX	221	124	489	441	711	367	445	329	851	85.8	131	306										
(WY)	1974	1975	1992	1968	1992	1992	1997	1997	1981	1976	1974	1981										
MIN	.069	.16	.22	.31	.81	1.10	.89	.24	.37	.13	.036	.022										
(WY)	1979	1989	1989	1996	1990	1996	1984	1971	1978	1980	1980	1984										

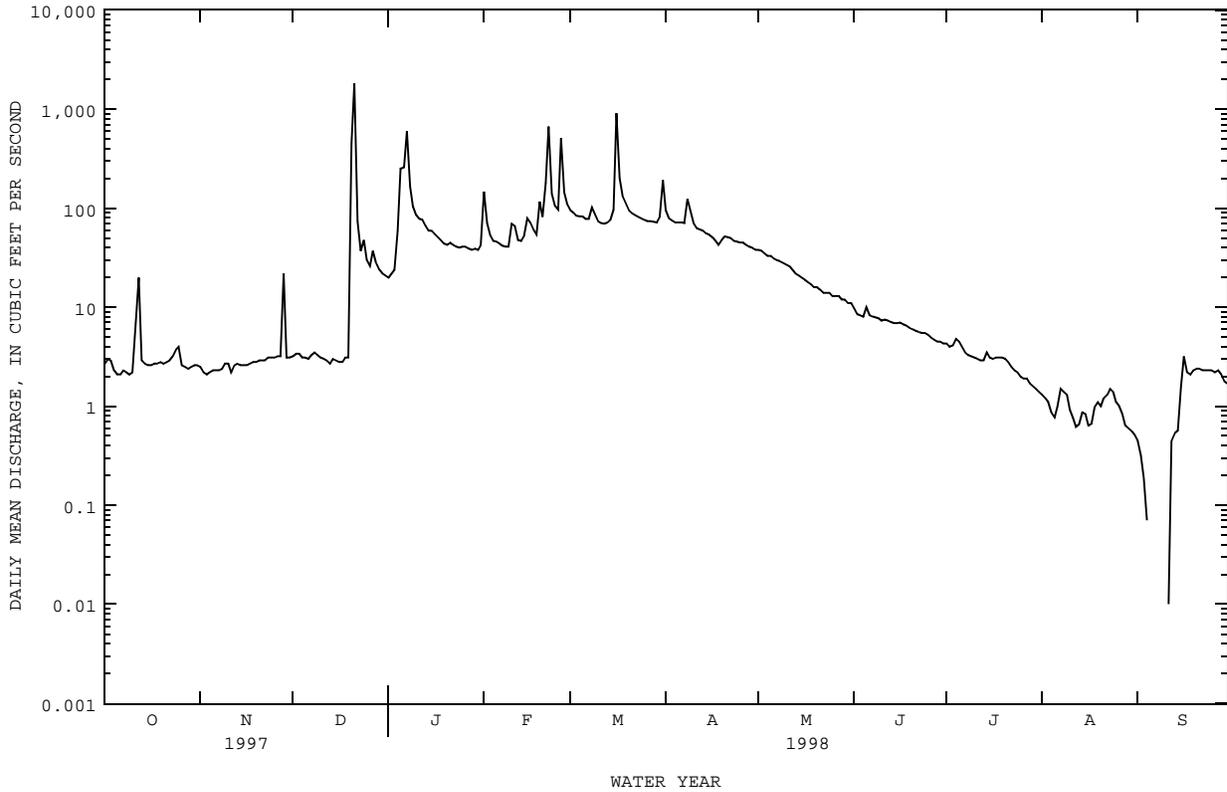
SUMMARY STATISTICS

	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1968 - 1998	
ANNUAL TOTAL	54383.36		17913.57			
ANNUAL MEAN	149		49.1		52.8	
HIGHEST ANNUAL MEAN					203	
LOWEST ANNUAL MEAN					2.15	
HIGHEST DAILY MEAN	4480		1580		7830	
LOWEST DAILY MEAN	.96		.05		.00	
ANNUAL SEVEN-DAY MINIMUM	1.4		.05		.00	
INSTANTANEOUS PEAK FLOW			5600		33400	
INSTANTANEOUS PEAK STAGE			10.85		24.60	
ANNUAL RUNOFF (AC-FT)	107900		35530		38280	
10 PERCENT EXCEEDS	286		120		103	
50 PERCENT EXCEEDS	57		5.6		12	
90 PERCENT EXCEEDS	2.0		.12		.33	

BRAZOS RIVER BASIN

08105100 BERRY CREEK NEAR GEORGETOWN, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1968 - 1998	
ANNUAL TOTAL	26059.6		15249.24		27.7	
ANNUAL MEAN	71.4		41.8		106	
HIGHEST ANNUAL MEAN					1992	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	2510	Apr 4	1830	Dec 21	4670	Oct 31 1974
LOWEST DAILY MEAN	1.9	Sep 30	.00	Sep 5	.00	May 4 1971
ANNUAL SEVEN-DAY MINIMUM	2.2	Oct 4	.00	Sep 5	.00	May 4 1971
INSTANTANEOUS PEAK FLOW			6590	Dec 21	15500	Oct 31 1974
INSTANTANEOUS PEAK STAGE			15.26	Dec 21	19.33	Oct 31 1974
ANNUAL RUNOFF (AC-FT)	51690		30250		20090	
10 PERCENT EXCEEDS	114		83		51	
50 PERCENT EXCEEDS	25		6.5		4.6	
90 PERCENT EXCEEDS	2.7		1.2		.00	



08105600 GRANGER LAKE NEAR GRANGER, TX

LOCATION.--30°41'34", long 97°19'34", Williamson County, Hydrologic Unit 12070205, at Granger Dam on San Gabriel River, 1.5 mi south of Friendship, 2.2 mi upstream from Willis Creek, 7.1 mi east of Granger, and at mile 31.9.

DRAINAGE AREA.--730 mi².

PERIOD OF RECORD.--Jan 1980 to current year.

Water-quality records.--Chemical and biochemical analyses: Oct 1980 to Aug 1989.

GAGE--Water-stage recorder. Datum of gage is sea level (levels by U.S. Army Corps of Engineers). Prior to Mar 27, 1980, nonrecording gage at present site and datum. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam, 16,320 ft long, including the spillway. The lake was built for water conservation and flood control. Deliberate impoundment began on Jan 21, 1980. The spillway is an ungated 950-foot long ogee weir, located near right end of dam. The spillway for normal flood releases is a gated 18-foot-diameter conduit, controlled by two 8- by 18-foot slide gates, located near the center of dam. The invert for the floodgate is 457.0 ft. A low-flow outlet consists of three 3- by 4-foot gated openings, with invert elevations of 486.0, 494.0, and 502.0 ft. Figures given herein represent total contents. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam.....	555.0
Designed flood.....	550.3
Crest of spillway.....	528.0
Top of conservation pool.....	504.0
Lowest gated outlet (invert of 18-foot conduit).....	457.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 268,200 acre-ft, Mar 5, 1992 (elevation, 530.11 ft); minimum, 615 acre-ft, Jan 21, 1980 (elevation, 462.60 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 79,980 acre-ft, Jan 8 (elevation, 509.22 ft); minimum daily contents, 50,090 acre-ft, Sep 9 (elevation, 502.80 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54610	54980	55310	65710	56920	57480	55470	56230	55720	54490	52590	50700
2	54570	54980	55140	64350	56790	56920	55470	56100	55600	54410	52430	50660
3	54530	54940	54980	62960	56360	57180	56150	55930	55470	54330	52240	50620
4	54490	54980	54610	61730	55930	56920	56400	55810	55390	54610	52120	50550
5	54490	54980	54490	62580	55600	56100	56440	55640	55640	54940	52010	50430
6	54490	54980	54610	71090	55560	55600	56020	55470	55720	54980	51930	50360
7	54610	54980	54820	77780	55520	56020	55390	55350	55640	54940	51970	50280
8	54690	54980	54940	79980	55470	56320	55020	55350	55600	54820	51890	50210
9	54820	55430	54940	79650	55310	56060	55060	55470	55520	54740	51770	50090
10	54820	55680	54820	77560	56150	55390	55520	55470	55430	54610	51620	50130
11	55390	55810	54740	75080	55930	54690	55890	55600	55560	54530	51500	50970
12	56020	56020	54650	72540	55810	54820	56270	55720	55560	54450	51350	51040
13	56060	56150	54570	69860	55640	55640	56400	55810	55470	54370	51270	51040
14	55930	56020	54490	67190	55640	56190	56610	55980	55390	54330	51430	51890
15	55810	56060	54490	64150	55560	55850	56740	55980	55270	54290	51350	53500
16	55640	55930	54490	62810	55470	61870	56530	56060	55140	54210	51270	54940
17	55470	55810	54530	61820	55310	62810	56320	56100	55060	54090	51430	55140
18	55350	55720	54610	60930	55310	63530	56150	56100	54980	54090	51460	55230
19	55190	55640	54740	59870	55720	63620	55980	56060	54940	54010	51390	55270
20	55060	55560	57660	58820	55470	63050	55810	56020	54860	53930	51310	55270
21	54900	55470	71190	58100	56740	61400	55520	55980	54780	53850	51200	55230
22	54740	55390	72180	57220	60380	59830	55140	55980	54650	53770	51120	55230
23	54860	55270	73590	57220	59550	58330	54900	55930	54610	53650	51120	55230
24	54860	55230	74170	57180	58730	57310	55190	55890	54490	53530	51040	55060
25	54900	55140	74650	57050	58100	56400	55430	55850	54410	53460	50970	54780
26	54820	55100	75290	56700	60150	55810	55810	55850	54370	53340	50890	54450
27	54780	55060	74280	56190	59460	55930	56190	55930	54290	53260	50810	54330
28	54820	55520	72440	55390	58510	56400	56440	55930	54250	53140	50740	54370
29	54860	55640	70570	55270	---	56740	56570	55930	54530	53020	50810	54330
30	54940	55520	68840	55680	---	56660	56490	55890	54490	52820	50740	54330
31	54980	---	67140	55930	---	56660	---	55810	---	52750	50740	---
MAX	56060	56150	75290	79980	60380	63620	56740	56230	55720	54980	52590	55270
MIN	54490	54940	54490	55270	55310	54690	54900	55350	54250	52750	50740	50090
(+)	504.00	504.13	506.70	504.23	504.82	504.40	504.36	504.20	503.89	503.47	502.97	503.85
(@)	+330	+540	+11620	-11210	+2580	-1850	-170	-680	-1320	-1740	-2010	+3590
CAL YR 1997	MAX 120300	MIN 54490	(@)	+12160								
WTR YR 1998	MAX 79980	MIN 50090	(@)	-320								

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08105700 SAN GABRIEL RIVER AT LANEPORT, TX

LOCATION.--Lat 30°41'39", long 97°16'43", Williamson County, Hydrologic Unit 12070205, on right bank at upstream side of county bridge, 0.2 mi north of Laneport, 3.4 mi downstream from Willis Creek, 7.5 mi northwest of Thrall, and 26.2 mi upstream from mouth.

DRAINAGE AREA.--738 mi².

PERIOD OF RECORD.--Jul 1965 to current year.

Water-quality records.--Chemical and biochemical analyses: Jul 1972 to Aug 1989. Continuous daily water temperature records: Dec 1976 to Mar 1982.

REVISED RECORDS.--WRD TX-74-1: 1965(M), 1966(P), 1967(M), 1968, 1969(P), 1973(P). WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 412.60 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since Jan 21, 1980, at least 10% of contributing drainage area has been regulated by Granger Lake (station 08105600). No known diversions. One observation of water temperature was made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--14 years (water years 1966-79), 289 ft³/s (209,400 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1966-79).--Maximum discharge, 31,200 ft³/s Oct 31, 1974 (gage height, 30.80 ft); minimum daily, 0.28 ft³/s Aug 25-28, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1910, 39.6 ft, occurred Sep 1921. Other significant flood occurred Apr 1957, 34.6 ft; and Oct 1959, 33.8 ft; from floodmarks at present site and datum (discharges not determined).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	19	152	1450	145	1460	879	219	19	5.8	22	11
2	22	20	274	1450	527	1450	890	219	19	5.9	27	11
3	24	20	281	1450	905	1450	371	219	19	6.0	29	11
4	26	20	276	1440	902	1450	366	218	19	6.8	41	11
5	27	23	150	788	901	1440	366	217	20	6.3	49	11
6	29	23	19	27	681	992	543	217	20	6.6	47	11
7	31	23	20	40	455	447	797	204	20	13	30	11
8	30	23	42	20	455	443	794	108	19	13	28	11
9	29	24	100	798	453	642	575	32	20	13	27	12
10	29	27	97	1830	458	871	269	32	20	13	27	12
11	32	63	92	2070	568	886	63	25	20	6.4	26	14
12	32	114	100	2180	679	481	62	14	19	6.1	26	13
13	31	109	99	2160	679	131	137	8.8	19	6.2	27	12
14	66	108	103	2140	679	201	212	8.9	19	6.2	28	13
15	110	108	103	2110	796	575	263	21	18	6.1	27	185
16	110	108	75	1590	795	881	363	21	18	6.0	26	72
17	110	107	17	905	680	882	360	21	15	6.0	27	18
18	110	109	16	902	683	1380	359	21	7.7	6.1	27	11
19	111	109	17	898	687	1890	359	21	7.7	6.2	26	10
20	112	111	27	981	793	1860	359	21	7.7	6.2	26	10
21	112	111	48	1050	907	1850	356	20	7.6	6.3	25	12
22	112	110	21	1040	931	1730	341	20	7.6	6.4	25	12
23	78	109	21	640	1080	1630	259	20	7.6	6.5	27	12
24	16	101	22	267	1260	1460	60	20	7.6	6.5	26	70
25	17	112	19	267	1250	1110	60	20	7.6	6.7	26	150
26	16	112	20	505	1260	1020	61	20	5.3	6.7	26	152
27	17	112	687	711	1330	622	62	20	5.3	6.8	26	86
28	17	113	1500	711	1480	381	71	20	5.4	7.7	22	12
29	18	113	1480	449	---	379	143	20	6.0	7.0	11	12
30	18	113	1470	111	---	501	219	20	6.1	6.8	11	12
31	20	---	1460	127	---	601	---	19	---	8.5	11	---
TOTAL	1534	2374	8808	31107	22419	31096	10019	2086.7	412.2	226.8	829	1000
MEAN	49.5	79.1	284	1003	801	1003	334	67.3	13.7	7.32	26.7	33.3
MAX	112	114	1500	2180	1480	1890	890	219	20	13	49	185
MIN	16	19	16	20	145	131	60	8.8	5.3	5.8	11	10
AC-FT	3040	4710	17470	61700	44470	61680	19870	4140	818	450	1640	1980

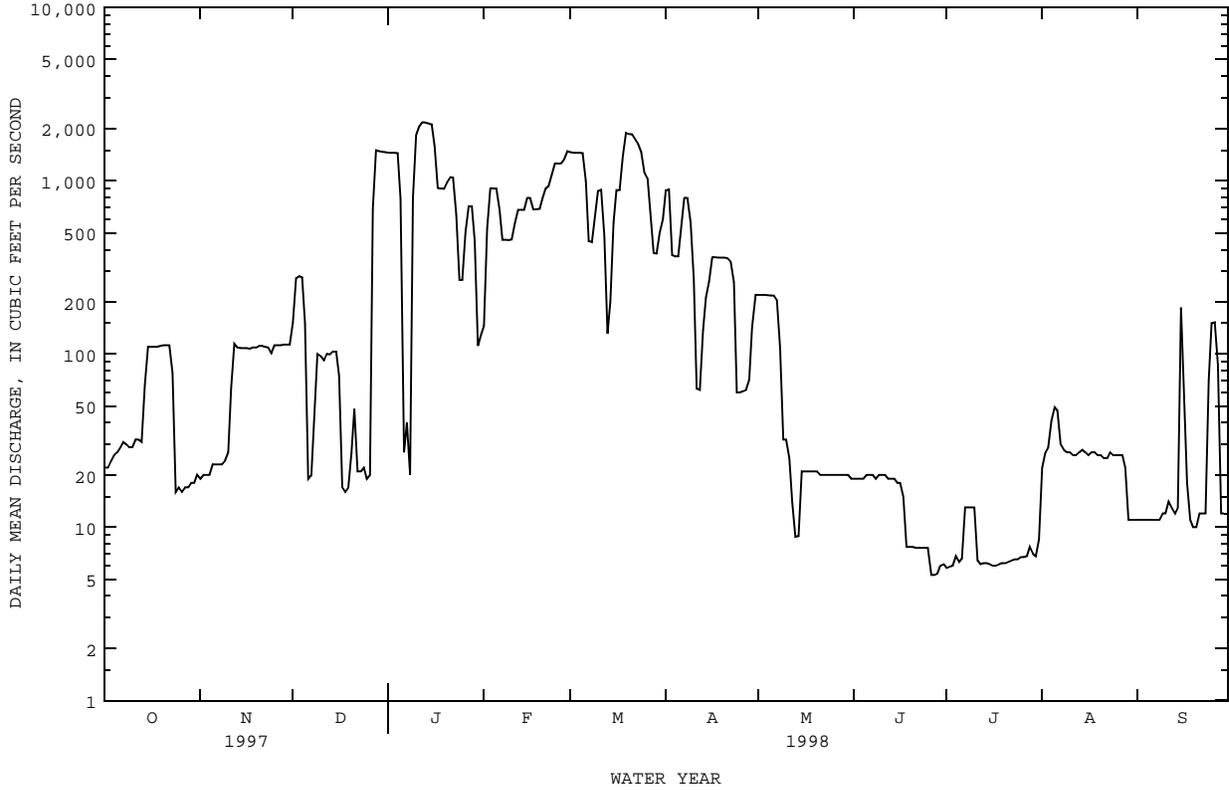
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998z, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
MEAN	69.3	94.9	197	270	309	425	330	433	496	417	36.7	84.3							
MAX	464	378	953	1233	1334	2210	1685	2103	1732	2196	134	922							
(WY)	1982	1982	1986	1987	1992	1992	1992	1997	1981	1992	1992	1981							
MIN	3.21	3.99	3.06	5.25	2.62	3.24	3.53	2.87	4.21	.19	.018	.000							
(WY)	1983	1983	1983	1981	1980	1980	1984	1984	1996	1984	1984	1984							

08105700 SAN GABRIEL RIVER AT LANEPORT, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1980 - 1998z	
ANNUAL TOTAL	236999		111911.7		263	
ANNUAL MEAN	649		307		1015	
HIGHEST ANNUAL MEAN					21.4 1992	
LOWEST ANNUAL MEAN					6870 1980	
HIGHEST DAILY MEAN	2820	May 7	2180	Jan 12	Mar 5 1992	
LOWEST DAILY MEAN	16	Oct 24	5.3	Jun 26	Aug 21 1984	
ANNUAL SEVEN-DAY MINIMUM	17	Oct 24	5.7	Jun 26	Aug 21 1984	
INSTANTANEOUS PEAK FLOW			2220	Jan 11	Oct 31 1974	
INSTANTANEOUS PEAK STAGE			11.82	Jan 11	Oct 31 1974	
ANNUAL RUNOFF (AC-FT)	470100		222000		190700	
10 PERCENT EXCEEDS	2130		1030		890	
50 PERCENT EXCEEDS	147		42		30	
90 PERCENT EXCEEDS	20		7.7		3.7	

z Period of regulated streamflow.



BRAZOS RIVER BASIN

08106350 LITTLE RIVER NEAR ROCKDALE, TX

LOCATION.--Lat 30°45'38", long 97°00'49", Milam County, Hydrologic Unit 12070204, on right bank downstream from Alcoa pumping station, 200 ft downstream from mouth of San Gabriel River, and 6.8 mi north of Rockdale.

DRAINAGE AREA.--6,959 mi².

PERIOD OF RECORD.--Feb 1981 to current year (daily mean discharges less than 1,000 ft³/s).

GAGE.--Water-stage recorder. Datum of gage is 299.12 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair. Daily mean discharges above 1,000 ft³/s are not published. Since 1981, at least 10% of contributing drainage area has been regulated by Belton Lake (station 08102000), Stillhouse Hollow Lake (station 08104050), and Granger Lake (station 08105600). There are numerous diversions for irrigation and municipal supply above station. Flow in the San Gabriel may be affected at times by discharge from the flood-detention pools of 46 flood water-retarding structures with a combined detention capacity of 46,140 acre-ft. These structures control runoff from 144 mi² in the Brushy Creek drainage basin. The Aluminum Company of America diverts water from Little River to their plant reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 38.34 ft Dec 21, 1991 (maximum discharge not determined); minimum daily discharge 13.0 ft³/s May 9, 1984.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,780 ft³/s, Jan 30, Feb 3, 7 (gage height, 10.82 ft); minimum discharge, 100 ft³/s, Oct 5 (gage height, 4.35 ft).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	133	363	---	---	---	---	---	253	198	163	199
2	110	129	376	---	---	---	---	---	245	195	149	185
3	106	123	480	---	---	---	---	---	238	197	154	174
4	103	121	798	---	---	---	---	---	229	198	157	172
5	105	120	667	---	---	---	---	---	233	211	170	166
6	111	120	449	---	---	---	---	---	235	275	179	158
7	111	121	302	---	---	---	---	---	234	261	210	159
8	121	123	238	---	---	---	---	---	236	233	316	142
9	154	125	258	---	---	---	---	973	233	222	212	134
10	188	136	320	---	---	---	---	918	221	216	182	135
11	308	334	339	---	---	---	---	901	213	209	169	162
12	241	321	330	---	---	---	---	833	214	192	167	228
13	795	580	327	---	---	---	---	542	296	186	161	640
14	434	570	292	---	---	---	---	471	223	185	177	445
15	332	401	245	---	---	---	---	463	209	185	212	---
16	281	341	223	---	---	---	---	504	198	184	314	---
17	243	413	192	---	---	---	---	495	183	194	205	---
18	e230	290	159	---	---	---	---	475	167	190	189	---
19	e225	267	150	---	---	---	---	461	146	208	203	493
20	e220	256	162	---	---	---	---	389	143	204	198	311
21	217	239	---	---	---	---	---	350	143	192	182	240
22	212	222	---	---	---	---	---	321	144	181	176	206
23	210	214	---	---	---	---	---	310	146	164	174	185
24	181	211	---	---	---	---	---	291	151	154	174	176
25	152	213	---	---	---	---	---	281	253	148	178	321
26	144	214	---	---	---	---	---	275	302	146	182	330
27	133	215	---	---	---	---	---	273	222	144	171	293
28	129	220	---	---	---	---	---	356	201	145	166	203
29	126	466	---	---	---	---	---	394	195	145	162	165
30	125	620	---	---	---	---	---	301	196	161	182	157
31	135	---	---	---	---	---	---	268	---	167	205	---
TOTAL	6296	7858	---	---	---	---	---	---	6302	5890	5839	---
MEAN	203	262	---	---	---	---	---	---	210	190	188	---
MAX	795	620	---	---	---	---	---	---	302	275	316	---
MIN	103	120	---	---	---	---	---	---	143	144	149	---
AC-FT	12490	15590	---	---	---	---	---	---	12500	11680	11580	---

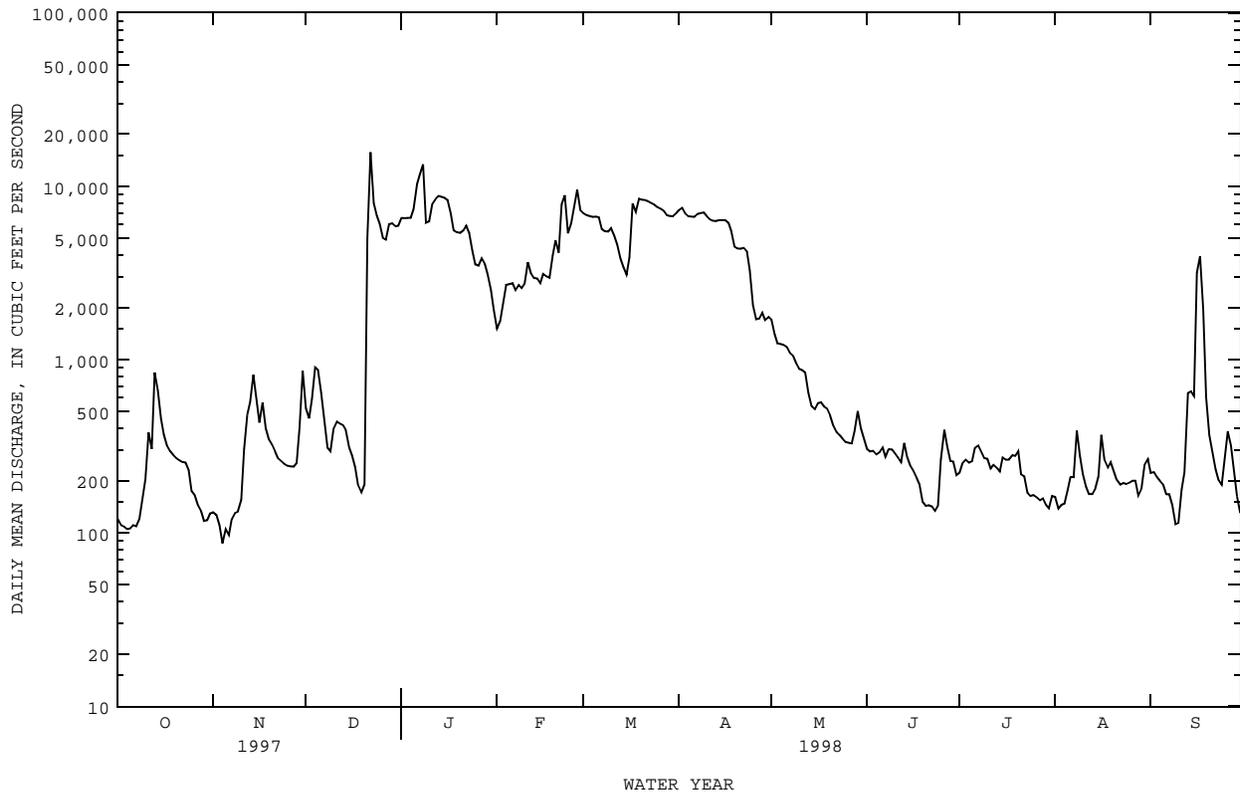
e Estimated

BRAZOS RIVER BASIN

08106500 LITTLE RIVER AT CAMERON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998z	
ANNUAL TOTAL	1734629		829191		1734	
ANNUAL MEAN	4752		2272		7759	
HIGHEST ANNUAL MEAN					174	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	24500	Apr 5	15700	Dec 22	84200	May 18 1965
LOWEST DAILY MEAN	87	Nov 4	87	Nov 4	.00	Jul 12 1956
ANNUAL SEVEN-DAY MINIMUM	110	Oct 1	110	Oct 1	.00	Jul 12 1956
INSTANTANEOUS PEAK FLOW			16700		116000	
INSTANTANEOUS PEAK STAGE			27.80		39.56	
ANNUAL RUNOFF (AC-FT)	3441000		1645000		1256000	
10 PERCENT EXCEEDS	9900		6940		5050	
50 PERCENT EXCEEDS	2730		400		490	
90 PERCENT EXCEEDS	162		149		67	

e Estimated
z Period of regulated streamflow.



08108700 BRAZOS RIVER AT STATE HIGHWAY 21 NR BRYAN, TX

LOCATION.--Lat 30°37'36", long 96°32'38", Brazos-Burleson County line, Hydrologic Unit 12070101, on right bank, 8 ft downstream from bridge on State Highway 21, 2.1 mi upstream from Little Brazos River, 10.5 mi west of Bryan.

DRAINAGE AREA.--39,049 mi², approximately, of which 9,566 mi² probably is noncontributing.

PERIOD OF RECORD.--Jul 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 188.65 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. Since installation of gage in 1993, at least 10% of contributing drainage area is regulated by six upstream reservoirs with a combined capacity of 4,828,600 acre-ft, of which 3,482,690 acre-ft is for flood control. Many small diversions above station for irrigation, municipal, industrial, and oil field operation. Flow is affected at times by discharge from the flood-detention pools of 145 floodwater-retarding structures with a combined detention capacity of 152,800 acre-ft. These structures control runoff from 450 mi². Several observations of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec 5, 1913, reached a stage of 61 ft, present site and datum, from information by Texas and New Orleans Railroad Co. at their bridge 200 ft upstream. Flood in 1854 reached about the same stage as flood of Dec 5, 1913.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	885	940	1380	9600	3190	16000	13000	2830	1540	1180	840	877
2	1050	848	1010	8520	2550	16200	12900	2820	1320	887	840	852
3	941	858	1150	8820	2570	14900	12200	2680	2450	1400	728	844
4	912	908	1030	10200	2990	13000	11800	2440	1600	1470	534	804
5	1030	694	1130	15700	3530	10800	11200	2450	1330	1500	987	711
6	928	802	1290	39600	3660	11800	11100	2430	1280	1060	1380	1170
7	731	820	1280	46900	3790	12400	11100	2470	1230	719	1040	1260
8	642	749	1060	57100	4100	12100	9770	2560	976	605	618	1040
9	604	781	864	52300	5040	11400	9460	2520	782	477	554	874
10	694	1190	1310	27100	6060	11500	10300	2100	657	1120	560	533
11	859	963	2190	22200	8720	11800	8980	1870	673	1130	780	492
12	890	913	1480	20100	8830	9270	9090	1650	1210	1050	462	685
13	1660	1400	1220	19400	8920	6900	9040	1730	1340	1070	668	840
14	1760	1760	1380	18300	7750	5520	8180	1760	922	1130	882	830
15	1530	1480	1390	17500	5960	5580	8030	1500	760	1320	711	1130
16	1020	1180	1390	16300	5180	5630	8860	1370	995	1090	867	7760
17	881	1000	1670	14400	5620	8530	8760	1260	1130	809	661	8840
18	950	1910	1600	11100	5400	26400	8620	1220	1100	891	512	7810
19	909	2070	1130	8860	5980	33300	6630	1170	1060	1010	847	4420
20	891	1250	1000	8130	9280	37200	5740	1150	1220	862	948	1870
21	883	1280	11600	7700	8350	39300	5750	1110	1340	562	929	1070
22	937	1240	48600	11900	11000	40000	6120	1040	1380	417	612	824
23	1100	1060	51400	9810	20000	39500	6420	1000	1450	782	928	968
24	1380	879	31000	8650	16200	37700	5530	976	1230	868	940	1100
25	1140	826	23600	6600	10300	28200	4550	953	1060	910	593	1160
26	1020	851	18200	6120	10900	21500	4270	911	1100	898	371	1370
27	992	855	14900	6720	18900	20200	4080	917	913	803	299	1200
28	871	868	13200	6370	16700	18100	3170	951	844	998	406	821
29	1140	872	12000	5280	---	14900	3130	1210	864	849	1180	637
30	1220	965	10900	4950	---	12400	2840	1280	1070	458	1030	416
31	1030	---	11100	4050	---	12100	---	1410	---	519	882	---
TOTAL	31480	32212	272454	510280	221470	564130	240620	51738	34826	28844	23589	53208
MEAN	1015	1074	8789	16460	7910	18200	8021	1669	1161	930	761	1774
MAX	1760	2070	51400	57100	20000	40000	13000	2830	2450	1500	1380	8840
MIN	604	694	864	4050	2550	5520	2840	911	657	417	299	416
AC-FT	62440	63890	540400	1012000	439300	1119000	477300	102600	69080	57210	46790	105500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1998z, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	1636	1753	5222	5777	6957	12330	9613	9030	6644	2869	2791	1911
MAX	2692	2689	8789	16460	21210	31650	26320	20120	16320	9389	11420	4577
(WY)	1995	1997	1998	1998	1997	1997	1997	1997	1997	1997	1995	1996
MIN	1015	1074	1003	1053	807	772	673	448	1161	872	548	841
(WY)	1998	1998	1996	1996	1996	1996	1996	1996	1998	1996	1996	1994

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1993 - 1998z

ANNUAL TOTAL	4329912	2064851	
ANNUAL MEAN	11860	5657	5583
HIGHEST ANNUAL MEAN			11920
LOWEST ANNUAL MEAN			1212
HIGHEST DAILY MEAN	66000	Apr 6	57100
LOWEST DAILY MEAN	462	Sep 30	299
ANNUAL SEVEN-DAY MINIMUM	670	Sep 25	593
INSTANTANEOUS PEAK FLOW			59700
INSTANTANEOUS PEAK STAGE			36.30
ANNUAL RUNOFF (AC-FT)	8588000	4096000	4045000
10 PERCENT EXCEEDS	31000	14900	15800
50 PERCENT EXCEEDS	5590	1330	1530
90 PERCENT EXCEEDS	922	756	698

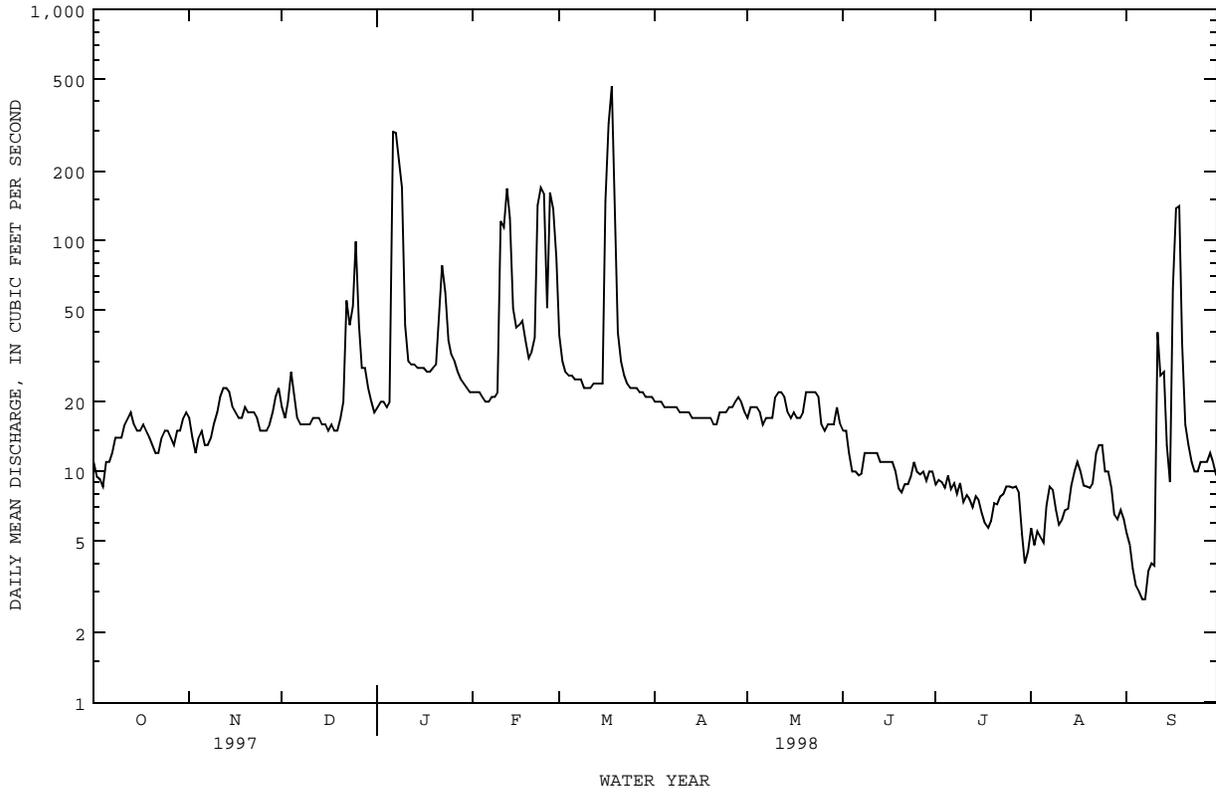
z Period of regulated streamflow.

BRAZOS RIVER BASIN

08109800 EAST YEGUA CREEK NEAR DIME BOX, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	11370.4		9827.0		62.7	
ANNUAL MEAN	31.2		26.9		245	
HIGHEST ANNUAL MEAN					3.93	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	389	Feb 14	467	Mar 18	9490	May 24 1975
LOWEST DAILY MEAN	5.4	Jan 6	2.8	Sep 6	.00	Aug 1 1962
ANNUAL SEVEN-DAY MINIMUM	5.8	Jan 1	3.3	Sep 3	.00	Aug 1 1962
INSTANTANEOUS PEAK FLOW			813	Jan 6	14000	May 24 1975
INSTANTANEOUS PEAK STAGE			9.17	Jan 6	13.91	May 24 1975
ANNUAL RUNOFF (AC-FT)	22550		19490		45460	
10 PERCENT EXCEEDS	42		40		74	
50 PERCENT EXCEEDS	25		17		11	
90 PERCENT EXCEEDS	11		7.5		.26	

e Estimated



08109900 SOMERVILLE LAKE NEAR SOMERVILLE, TX

LOCATION.--Lat 30°19'20", long 96°31'32", Burleson County, Hydrologic Unit 12070102, in intake structure of Somerville Dam on Yegua Creek, at the southwest edge of the city limits of Somerville, and 20.0 mi upstream from mouth.

DRAINAGE AREA.--1,007 mi².

PERIOD OF RECORD.--Feb 1966 to current year. Prior to Oct 1970, published as Somerville Reservoir.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 20,210 ft long, with a 4,715-foot-long dike and a 1,250-foot long uncontrolled spillway. Deliberate impoundment began Jan 3, 1967, and the dam was completed Oct 27, 1967. The spillway is an uncontrolled ogee weir 1,250 ft wide located near right end of dam. The low-flow outlet consists of one 10.0-foot-diameter conduit that is controlled by two 5.0- by 10.0-foot tractor-type gates. The lake was designed for flood control and water conservation. Figures given herein represent total contents. Data regarding the dam are given in the following table:

	Elevation (feet)
Top of dam.....	280.0
Design flood.....	274.5
Crest of spillway.....	258.0
Top of conservation pool.....	238.0
Lowest gated outlet (invert of 10-foot conduit).....	206.0

COOPERATION.--Record of contents furnished by the U.S. Army Corps of Engineers and reviewed by the U.S. Geological Survey. A new capacity table, provided by Texas Water Development Board, was put into use Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 547,600 acre-ft, Mar 6, 1992 (elevation, 259.60 ft); minimum, 88,800 acre-ft Oct 5, 1984 (elevation, 230.70 ft).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 190,400 acre-ft, Feb 28 (elevation, 240.89 ft); minimum daily contents, 125,400 acre-ft, Aug 13 (elevation, 235.18 ft).

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147000	155400	162700	158900	156200	189300	155500	154000	149500	135300	129000	128700
2	146900	155200	161800	158400	156200	187600	155600	153800	148900	134900	128800	128500
3	146700	155100	161700	157800	156100	185700	155400	153700	148200	135200	128700	128400
4	146600	154900	160500	157500	156000	183900	155300	153700	147600	135000	128800	128200
5	147200	154900	159700	157000	156000	182200	155300	153700	147200	134900	129100	127900
6	147700	154600	159000	163000	155900	180400	155300	153800	146100	134800	129100	127600
7	149500	154500	158900	157500	155500	179400	155300	153700	145500	134500	129800	127300
8	154500	154400	158400	183000	155400	176700	155500	153600	145000	134200	129600	127300
9	155600	154700	157800	186300	155500	174100	155400	153500	144300	134000	129500	127100
10	156000	155300	157000	186700	166400	171700	155300	153100	143700	133800	129400	126300
11	158300	155500	156200	186800	173400	169300	155100	153100	143100	133600	126500	135700
12	159300	157200	155700	188600	175900	167000	154900	152900	142600	133300	125600	142500
13	167900	158100	155700	187900	176000	164700	155100	152800	142000	133100	125400	145100
14	169800	158200	155700	185900	175400	163100	155100	152700	141200	133300	127800	145600
15	169400	158100	155700	183500	174800	161000	155200	152800	140900	133100	127600	148100
16	168200	157700	155900	181200	175100	165900	154900	152800	140400	132900	127600	154000
17	167000	157400	155700	178900	174600	169000	154800	152700	139900	132800	127500	156400
18	165600	157100	155700	176700	173200	170800	154600	152600	139400	132600	127400	157000
19	164100	156900	155900	174100	171300	171000	154500	152300	138900	132300	127300	157500
20	162700	156700	156800	171700	169000	170000	154500	152200	138500	132000	127100	157600
21	161400	156400	156400	170800	169600	168200	154500	152200	138000	131800	127900	157500
22	159800	156100	156300	168900	173300	166400	154400	151800	137600	131600	127800	157100
23	159000	155700	158100	167300	174500	164500	154100	151500	137100	131400	128200	156700
24	157700	155600	160700	165200	174300	162600	154000	151200	136700	131100	128100	156300
25	157100	155700	162100	163100	174300	160700	153900	151000	136700	130800	128100	156100
26	156100	155900	163200	160700	183600	158700	154100	150800	136200	130600	127800	156500
27	155400	155900	163000	158900	188800	157800	154100	150800	135900	130400	127900	156500
28	155300	161200	162600	157400	190400	157100	153900	150500	135900	130200	127700	156300
29	155300	163100	161200	156300	---	156500	153800	150300	135600	129900	128300	156100
30	155500	163200	160100	156200	---	156700	153900	150100	135500	129400	129000	155900
31	155600	---	159300	156400	---	155700	---	149900	---	129300	128700	---
MAX	169800	163200	163200	188600	190400	189300	155600	154000	149500	135300	129800	157600
MIN	146600	154400	155700	156200	155400	155700	153800	149900	135500	129300	125400	126300
(+)	238.04	238.69	238.36	238.11	240.89	238.05	237.89	237.53	236.18	235.57	235.51	238.06
(@)	+8500	+7600	-3900	-2900	+34000	-34700	-1800	-4000	-14400	-6200	-600	+27200
CAL YR 1997	MAX 180500	MIN 145000	(@) +1700									
WTR YR 1998	MAX 190400	MIN 125400	(@) +8800									

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

08110325 NAVASOTA RIVER ABOVE GROESBECK, TX

LOCATION.--Lat 31°34'27", long 96°31'14", Limestone County, Hydrologic Unit 12070103, in city of Groesbeck at water supply pumping plant, 1.2 mi downstream from Springfield Lake, 3.7 mi north of Groesbeck, and 161.4 mi upstream from mouth.

DRAINAGE AREA.--239 mi².

PERIOD OF RECORD.--Jul 1975 to May 1978 (periodic gage-height and low-flow measurements only), Jun 1978 to current year.
Water-quality records.--Chemical analyses: Nov 1967 to Jun 1989.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 396.65 ft above sea level. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records fair. Since 1975, at least 10% of contributing drainage area has been regulated by Lake Mexia (08110300) 7.4 mi upstream (capacity, 9,400 acre-ft) and by Springfield Lake 1.2 mi upstream (approximate capacity, 3,100 acre-ft). There are several diversions above station for irrigation, municipal supply, and oil field operation (total amount is unknown). The city of Groesbeck diverts water from pool at gage for municipal use, and returns washwater and wastewater effluent into river downstream from gage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1910, 26 ft in 1910 and 1944, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	13	32	87	17	.78	.00	.00	.00	.00
2	.00	.00	.00	11	36	46	14	.71	.00	.00	.00	.00
3	.00	.00	.13	9.6	38	30	14	.71	.00	.00	.00	.00
4	.00	.00	.12	8.7	41	22	11	.71	.00	.00	.00	.00
5	.00	.00	.10	300	44	20	7.9	.70	.00	.00	.00	.00
6	.00	.00	.11	5670	50	16	6.2	.68	.06	.00	.00	.00
7	.00	.00	.20	11600	51	14	6.4	.58	.15	.00	.00	.00
8	.00	.00	.31	3470	53	26	11	.55	.16	.00	.00	.00
9	.00	.00	.18	1790	57	14	9.4	.55	.07	.00	.00	.00
10	.00	.00	.11	856	95	8.2	5.7	.44	.01	.00	.01	.00
11	.00	.00	.06	327	204	5.3	3.6	.47	.01	.00	.00	.00
12	.00	.00	.02	93	181	3.6	2.1	.40	.02	.00	.00	.00
13	.00	.00	.07	67	146	2.7	2.4	.28	.01	.00	.00	.00
14	.00	.00	.13	58	126	3.1	1.9	.40	.00	.00	.00	.00
15	.00	.00	.16	52	118	4.3	1.8	.40	.00	.00	.00	6.5
16	.00	.00	.20	44	112	255	2.8	.33	.00	.00	.00	3.4
17	.00	.00	.13	39	111	1600	2.0	.30	.00	.00	.00	3.8
18	.00	.00	.10	36	102	801	1.8	.27	.00	.00	.00	1.1
19	.00	.00	.12	31	105	548	1.6	.23	.00	.00	.00	.48
20	.00	.00	5.3	27	104	833	1.4	.22	.00	.00	.00	.21
21	.00	.00	377	26	105	294	2.2	.17	.00	.00	.00	.11
22	.00	.00	2490	36	298	93	1.6	.13	.00	.00	.00	.08
23	.00	.00	833	118	425	49	1.1	.14	.00	.00	.00	.08
24	.00	.00	937	77	204	36	.95	.14	.00	.00	.00	.02
25	.00	.00	588	51	75	26	1.0	.12	.00	.00	.00	.00
26	.00	.00	212	46	748	17	1.0	.12	.00	.00	.00	.00
27	.00	.00	98	34	1110	16	1.4	.15	.00	.00	.00	.00
28	.00	.00	71	28	307	14	1.1	.12	.00	.00	.00	.00
29	.00	.00	43	25	---	9.2	.96	.08	.00	.00	.00	.00
30	.00	.00	27	26	---	8.2	.83	.03	.00	.00	.00	.00
31	.00	---	17	28	---	19	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	5700.55	24997.3	5078	4920.6	136.14	10.91	0.49	0.00	0.01	15.78
MEAN	.000	.000	184	806	181	159	4.54	.35	.016	.000	.000	.53
MAX	.00	.00	2490	11600	1110	1600	17	.78	.16	.00	.01	6.5
MIN	.00	.00	.00	8.7	32	2.7	.83	.00	.00	.00	.00	.00
AC-FT	.00	.00	11310	49580	10070	9760	270	22	1.0	.00	.02	31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1998z, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
MEAN	33.4	36.0	179	118	257	175	107	287	105	3.98	33.5	.66										
MAX	347	450	1154	806	909	1109	857	1384	554	51.4	570	5.24										
(WY)	1982	1986	1992	1998	1986	1990	1997	1979	1981	1981	1995	1979										
MIN	.000	.000	.075	.008	.000	.000	.000	.000	.000	.000	.000	.000										
(WY)	1993	1996	1990	1996	1996	1996	1996	1996	1996	1998	1994	1993										

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1978 - 1998z

ANNUAL TOTAL	68166.97	40859.78	
ANNUAL MEAN	187	112	111
HIGHEST ANNUAL MEAN			270
LOWEST ANNUAL MEAN			.011
HIGHEST DAILY MEAN	9070	Apr 5	11600
LOWEST DAILY MEAN	.00	Jul 29	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 26	.00
INSTANTANEOUS PEAK FLOW			12700
INSTANTANEOUS PEAK STAGE			11.70
ANNUAL RUNOFF (AC-FT)	135200	81050	80680
10 PERCENT EXCEEDS	268	103	102
50 PERCENT EXCEEDS	1.1	.10	1.1
90 PERCENT EXCEEDS	.00	.00	.00

z Period of regulated streamflow.

BRAZOS RIVER BASIN

08110430 BIG CREEK NEAR FREESTONE, TX

LOCATION.--Lat 31°30'24", long 96°19'28", Limestone County, Hydrologic Unit 12070103, 12 ft to left and 25 ft downstream from left end of bridge on State Highway 164, 5.1 mi southwest of Freestone, and 8.2 mi upstream from mouth.

DRAINAGE AREA.--97.2 mi².

PERIOD OF RECORD.--Jul 1975 to Jun 1978 (periodic gage-height and low-flow measurements only), Jul 1978 to current year.

REVISED RECORDS.--WDR TX-92-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 362.94 ft above sea level. Apr 25, 1985 to Aug 17, 1987, at site 62 ft downstream at same datum. Satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No known regulation or diversions.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1950, 19 ft in Apr 1957, from information by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 24	0400	513	11.51	Feb 27	1200	564	11.97
Jan 6	1715	4,540	14.66	Sep 16	0030	1,420	13.13
Feb 11	0030	1,500	13.33				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	5.9	10	10	68	86	5.1	.07	.00	.00	.00
2	.00	.00	4.7	10	11	39	35	4.5	.05	.00	.00	.00
3	.00	.00	5.4	11	9.8	29	24	4.1	.03	.00	.00	.00
4	.00	.00	9.0	11	8.6	24	18	3.4	.02	.00	.00	.00
5	.00	.00	5.4	1460	8.0	22	14	3.2	.04	.00	.00	.00
6	.00	.00	4.4	3050	7.5	20	12	3.4	.14	.00	.00	.00
7	.00	.00	6.5	2790	7.1	18	12	3.8	2.5	.00	.00	.00
8	.00	.00	30	1490	6.6	19	15	3.5	2.2	.00	.00	.00
9	.00	.00	19	579	6.6	18	21	3.3	.88	.00	.00	.00
10	.00	.00	6.4	259	588	15	17	2.4	.25	.00	.00	.00
11	.00	.00	4.7	90	1130	13	12	2.6	.18	.00	.00	.00
12	.00	2.4	4.1	62	559	11	10	2.2	.10	.00	.00	.00
13	9.4	4.9	3.8	51	238	11	8.9	2.0	.06	.00	.00	.04
14	12	5.3	3.7	39	74	12	8.4	1.9	.04	.00	.00	.11
15	3.3	4.6	3.4	33	45	26	7.9	3.0	.02	.00	.04	221
16	.50	3.9	3.5	29	40	170	7.5	2.3	.02	.00	.03	629
17	.03	3.5	3.5	24	38	428	7.2	1.8	.01	.00	.01	362
18	.00	3.2	3.6	21	30	327	6.3	1.9	.00	.00	.00	70
19	.00	2.7	3.7	19	55	148	6.1	1.4	.00	.00	.00	14
20	.00	1.9	15	17	54	388	5.9	1.1	.00	.00	.00	6.2
21	.00	1.2	407	17	41	225	6.0	.59	.00	.00	.00	4.3
22	.00	.95	390	17	298	60	6.5	.28	.00	.00	.00	3.4
23	.00	.88	222	17	357	38	6.2	.28	.00	.00	.00	2.7
24	.00	1.0	497	15	148	30	5.6	.31	.00	.00	.00	1.9
25	.00	.84	388	13	58	25	5.1	.25	.00	.00	.00	1.4
26	.00	.79	94	13	360	22	5.0	.16	.00	.00	.00	1.2
27	.00	.83	45	12	528	20	5.4	.11	.00	.00	.00	.55
28	.00	24	28	11	290	20	7.5	.10	.00	.00	.00	.20
29	.00	51	20	11	---	19	6.9	.08	.00	.00	.00	.41
30	.00	12	15	9.8	---	18	5.9	.08	.00	.00	.00	.19
31	.00	---	12	9.6	---	91	---	.07	---	.00	.00	---
TOTAL	25.23	125.89	2263.7	10200.4	5006.2	2374	394.3	59.21	6.61	0.00	0.08	1318.60
MEAN	.81	4.20	73.0	329	179	76.6	13.1	1.91	.22	.000	.003	44.0
MAX	12	51	497	3050	1130	428	86	5.1	2.5	.00	.04	629
MIN	.00	.00	3.4	9.6	6.6	11	5.0	.07	.00	.00	.00	.00
AC-FT	50	250	4490	20230	9930	4710	782	117	13	.00	.2	2620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1998, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
MEAN	22.3	26.2	86.7	67.1	106	76.8	53.2	92.4	43.5	5.23	2.64	5.63										
MAX	205	150	609	329	307	209	348	335	159	62.0	18.5	44.0										
(WY)	1985	1986	1992	1998	1997	1990	1997	1990	1989	1981	1995	1998										
MIN	.000	.000	.056	.20	3.36	4.50	3.31	.26	.000	.000	.000	.000										
(WY)	1990	1996	1981	1981	1981	1986	1984	1984	1996	1996	1984	1984										

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1978 - 1998

ANNUAL TOTAL	30478.33	21774.22	
ANNUAL MEAN	83.5	59.7	48.8
HIGHEST ANNUAL MEAN			138
LOWEST ANNUAL MEAN			3.46
HIGHEST DAILY MEAN	2350	Apr 4	3050
LOWEST DAILY MEAN	.00	Jul 29	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 29	.00
INSTANTANEOUS PEAK FLOW			4540
INSTANTANEOUS PEAK STAGE			14.66
ANNUAL RUNOFF (AC-FT)	60450	43190	35340
10 PERCENT EXCEEDS	224	69	80
50 PERCENT EXCEEDS	5.1	2.7	3.0
90 PERCENT EXCEEDS	.00	.00	.00

08110470 LAKE LIMESTONE NEAR MARQUEZ, TX

LOCATION.--Lat 31°19'30", long 96°19'08", Leon County, Hydrologic Unit 12070103, in left end bypass pier of Sterling C. Robertson Dam on the Navasota River, 7.5 mi northwest of Marquez, and 124 mi upstream from mouth.

DRAINAGE AREA.--675 mi².

PERIOD OF RECORD.--Nov 1978 to current year.

Water-quality records.--Chemical and biochemical analyses: Jan 1980 to Sep 1997.

GAGE.--Water-stage recorder. Datum of gage is sea level. Satellite telemeter at station.

REMARKS.--The lake is formed by a rolled earthfill dam 11,395 ft long, including the spillway. The lake was built for water conservation. Deliberate impoundment began on Oct 16, 1978. The spillway is an uncontrolled broad-crested weir 3,000 ft long located near left end of dam. The spillway for normal flood releases is a gated concrete gravity structure with an ogee weir section and stilling basin located near center of dam. It is controlled by five 40- by 28-foot tainter gates. There are two 4- by 8-foot slide gates located in each of the two center piers of the spillway that discharge into the stilling basin. These gates can also be opened during extreme floods. A low-flow outlet, consisting of a 10-inch-diameter cast iron pipe, is located in the left end of pier. In addition, there are two 36-inch (outside diameter) steel cylinder pipes located in the right end pier for water supply releases. The lowest invert for low flow and water supply releases is at elevation 325.50 ft. The city of Mexia releases various amounts of wastewater effluent into stream above lake. Figures given herein represent total contents. Data regarding dam are given in the following table:

	Elevation (feet)
Top of dam.....	380.0
Design flood.....	370.0
Crest of spillway.....	369.6
Top of gates.....	365.0
Top of conservation pool.....	363.0
Concrete gated spillway.....	337.0
Lowest gated outlet (invert).....	322.0

COOPERATION.--Records of daily lake elevations are obtained in cooperation with the Brazos River Authority. A new capacity table, provided by the Texas Water Development Board, was put into use beginning Oct 1, 1995.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 245,000 acre-ft, Dec 21, 1991 (elevation, 364.39 ft); minimum, 10,740 acre-ft, Nov 30, 1978, (elevation, 332.63 ft).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 238,200 acre-ft, Jan 7 (elevation, 363.95 ft); minimum contents, 164,600 acre-ft, Sep 10 (elevation, 358.81 ft).

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184300	180400	180300	211900	215400	220300	224100	213600	204000	191200	177100	168800
2	184300	180100	181200	212200	215500	218500	223100	213600	203400	190700	176800	168300
3	184400	179700	181500	212200	215500	218000	222200	213600	202800	190600	175900	168000
4	184600	179200	180700	213800	215200	218500	220300	213000	202300	190400	175400	167400
5	184700	179700	180600	234800	215600	220100	219400	213000	203500	189900	175000	166800
6	184700	179100	180100	235200	215100	219200	219000	213000	202300	189500	175300	166500
7	184700	178800	181000	233800	214800	219000	219400	213000	201300	188800	174800	166100
8	184700	178500	181200	220800	214800	219900	219900	212100	200700	188400	174300	165700
9	184700	179100	182500	214300	214700	219400	218000	213000	200800	188100	173900	165400
10	184700	179400	181000	211700	228300	218500	217300	211700	200300	187700	173500	165100
11	184100	179100	181100	211800	232100	218700	216400	211000	200400	187000	173100	166000
12	184300	179800	180900	213200	225700	217600	215500	210600	199900	186500	172900	166300
13	185500	179900	180400	213000	222400	217600	216000	210500	199400	186200	173800	166400
14	184900	179800	180300	213800	220300	218300	215800	209700	199200	185800	174900	166700
15	184400	180100	179800	213000	219900	217800	215800	210000	199100	185300	174600	170100
16	184100	179800	179900	213200	219900	222700	216400	209700	198100	184800	174200	175600
17	183800	179400	179800	213000	220300	227100	215800	209300	197400	184100	173800	177700
18	183400	179400	179600	213900	221700	229500	215400	208900	197200	184000	173500	178000
19	183200	179200	179800	213000	220800	231200	215200	208700	196300	183400	173400	178000
20	183000	179300	182600	213200	219400	228800	216400	208300	196100	182600	172900	178000
21	183100	179200	187900	214300	221000	227100	215400	207600	195600	182300	172600	177900
22	182400	179200	194000	213900	225000	223600	215100	207000	195200	182000	172100	177800
23	182400	179100	201200	214300	229000	222400	214800	206800	194700	181500	171700	177700
24	182200	178800	207000	214200	228100	222200	213600	206700	194300	181000	171300	177300
25	183100	178700	210100	214200	228500	222400	213500	206100	193800	180600	171100	177100
26	182400	179000	211800	215000	232100	221300	214700	206100	193500	180000	170700	177000
27	181200	178700	211700	214700	233800	223400	214600	206200	192800	179600	170500	176800
28	180700	180600	212600	214700	227300	223100	214400	205700	192500	179000	170000	176700
29	180500	180600	212200	215000	---	222900	214000	205400	192100	178400	170000	176600
30	180400	180600	212500	214800	---	225000	213800	205000	191600	177800	169200	176500
31	180500	---	212100	215200	---	224800	---	204600	---	177500	169000	---
MAX	185500	180600	212600	235200	233800	231200	224100	213600	204000	191200	177100	178000
MIN	180400	178500	179600	211700	214700	217600	213500	204600	191600	177500	169000	165100
(+)	360.19	360.20	362.72	362.96	363.50	363.39	362.85	362.15	361.11	359.94	359.20	359.85
(@)	-3,600	+100	+31,500	+3,100	+12,100	-2,500	-11,000	-9,200	-13,000	-14,100	-8,500	+7,500

CAL YR 1997 MAX 235000 MIN 142500
WTR YR 1998 MAX 235200 MIN 165100

(+) Elevation, in feet, at end of month.
(@) Change in contents, in acre-feet.

BRAZOS RIVER BASIN

08110500 NAVASOTA RIVER NEAR EASTERLY, TX

LOCATION.--Lat 31°10'12", long 96°17'51", Leon-Robertson County line, Hydrologic Unit 12070103, at left downstream end of bridge on U.S. Highway 79, 1.0 mi upstream from Missouri Pacific Railroad Co. bridge, 7 mi northeast of Easterly, and 105.7 mi upstream from mouth.

DRAINAGE AREA.--968 mi².

PERIOD OF RECORD.--Mar 1924 to current year.

Water-quality records.--Chemical analyses: Dec 1941 to Sep 1947, Feb 1966 to Aug 1985. Sediment records: Oct 1968 to Sep 1973.

REVISED RECORDS.--WSP 898: 1924, 1926-27, 1928(M), 1929-30, 1931(M). WSP 1512: 1932(M), 1936. WDR TX-76-2: Drainage area. WDR TX- 78-2: 1974(M), 1977.

GAGE.--Water-stage recorder. Datum of gage is 271.46 ft above sea level. Prior to Jun 11, 1932, nonrecording gage at railroad bridge 1.0 mi downstream at 19.86-foot higher datum. Jun 11, 1932 to Sep 30, 1978, water-stage recorder 46 ft upstream at 5.00-foot higher datum. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1961, at least 10% of contributing drainage area has been regulated by Lake Mexia (station 08110300) and Lake Limestone (station 08110470). There are numerous diversions above station for irrigation, municipal supply, and oil field operation. One observation of water temperature was made during the year.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--36 years (water years 1925-60), 406 ft³/s (5.70 in/yr), 294,100 acre-ft/yr.

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1925-60).--Maximum discharge, 60,300 ft³/s May 2, 1944 (gage height, 27.13 ft); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1845, 29 ft in Jun 1899, from information by local residents (discharge, 90,000 ft³/s), from rating curve extended above 60,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	9.0	18	24	31	2990	434	17	64	61	63	52
2	8.4	8.6	14	23	31	2730	471	16	64	58	63	54
3	8.4	8.5	24	23	30	1210	431	15	63	59	63	55
4	8.2	8.5	24	24	28	141	418	14	63	60	63	45
5	8.2	8.9	21	70	27	82	394	14	63	60	64	50
6	8.3	9.0	15	6990	26	67	102	14	63	59	77	54
7	8.8	8.9	15	23500	25	61	31	14	63	58	78	55
8	9.9	9.0	21	26900	25	56	30	13	63	57	75	55
9	9.3	9.5	39	17200	25	61	345	42	63	57	66	55
10	9.0	14	26	7070	353	43	437	89	63	57	63	54
11	8.9	11	17	3610	1810	38	120	90	63	57	63	62
12	9.0	14	15	1340	3150	33	28	66	63	57	63	72
13	27	17	14	245	4110	32	23	67	62	57	71	71
14	18	16	13	118	2690	34	22	67	62	58	79	65
15	11	18	13	81	1260	38	20	68	61	61	85	100
16	9.3	17	13	64	613	153	20	68	61	63	68	129
17	8.9	14	13	50	371	902	20	67	61	65	64	197
18	8.7	12	13	44	217	1200	19	66	61	67	64	263
19	8.7	12	13	40	453	1270	18	65	61	64	63	51
20	8.7	11	16	37	893	1300	17	62	61	64	57	22
21	8.7	11	250	55	811	1300	18	61	61	57	53	19
22	8.8	11	481	210	1040	1270	18	61	61	55	53	17
23	8.8	11	830	83	1350	1180	17	61	61	58	54	15
24	9.0	11	1310	48	1220	445	17	61	61	58	55	14
25	8.9	11	933	43	1060	65	16	61	61	57	53	14
26	8.6	11	611	39	1390	42	15	55	61	57	53	14
27	8.4	11	e200	37	1740	37	16	54	61	57	53	14
28	8.7	14	e75	35	2290	37	16	53	60	59	53	13
29	9.0	18	e50	31	---	35	16	61	60	69	53	13
30	9.1	29	36	29	---	33	17	65	61	71	52	13
31	9.1	---	28	29	---	66	---	64	---	66	52	---
TOTAL	301.9	373.9	5161	88092	27069	16951	3566	1591	1856	1863	1936	1707
MEAN	9.74	12.5	166	2842	967	547	119	51.3	61.9	60.1	62.5	56.9
MAX	27	29	1310	26900	4110	2990	471	90	64	71	85	263
MIN	8.1	8.5	13	23	25	32	15	13	60	55	52	13
AC-FT	599	742	10240	174700	53690	33620	7070	3160	3680	3700	3840	3390

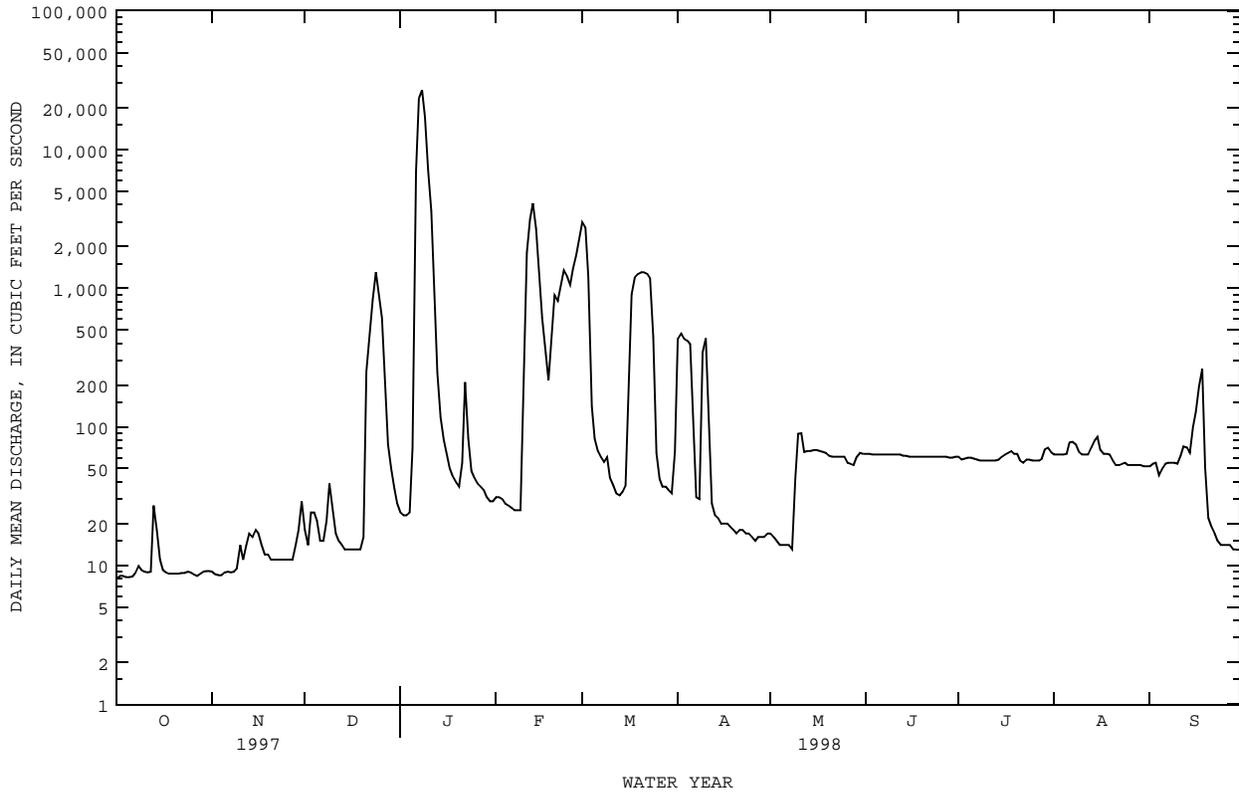
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1998z, BY WATER YEAR (WY)

MEAN	191	275	627	561	716	619	643	907	494	68.3	70.5	115
MAX	2427	4059	5244	2974	3322	2386	3761	5195	2794	474	1032	1614
(WY)	1974	1975	1992	1961	1992	1993	1966	1965	1973	1961	1995	1974
MIN	1.20	1.73	4.63	9.52	13.9	11.3	8.36	6.88	1.88	.37	.81	1.20
(WY)	1964	1964	1964	1964	1996	1996	1972	1972	1971	1964	1963	1972

08110500 NAVASOTA RIVER NEAR EASTERLY, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1961 - 1998z	
ANNUAL TOTAL	192576.3		150467.8		439	
ANNUAL MEAN	528		412		1172	
HIGHEST ANNUAL MEAN					15.4	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	19800	Apr 6	26900	Jan 8	57400	Dec 22 1991
LOWEST DAILY MEAN	7.9	Sep 29	8.1	Oct 1	.19	Aug 11 1980
ANNUAL SEVEN-DAY MINIMUM	8.1	Sep 27	8.3	Oct 1	.26	Jul 12 1964
INSTANTANEOUS PEAK FLOW			28500	Jan 8	61800	Dec 22 1991
INSTANTANEOUS PEAK STAGE			24.60	Jan 8	27.22	Dec 22 1991
ANNUAL RUNOFF (AC-FT)	382000		298500		318200	
10 PERCENT EXCEEDS	1470		533		916	
50 PERCENT EXCEEDS	50		55		28	
90 PERCENT EXCEEDS	9.1		9.7		2.9	

e Estimated
z Period of regulated streamflow.



BRAZOS RIVER BASIN

08110800 NAVASOTA RIVER AT OSR NEAR BRYAN, TX

LOCATION.--Lat 30°58'25", long 96°14'29", Robertson-Leon-Brazos-Madison county intersection, Hydrologic Unit 12070103, on right upstream end of bridge on OSR (Old San Antonio Road) 9.3 miles southwest of Normangee, 13 miles northeast of Wheelock, and 22 miles northeast of Bryan.

DRAINAGE AREA.--1,287 mi².

PERIOD OF RECORD.--Apr 1997 to Sep 1997.

REVISED RECORDS.--WDR TX-76-2: Drainage area. TX-96-2: 1996 (M).

GAGE.--Water-stage recorder. Datum of gage is 245 ft above sea level. Satellite telemeter at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Since installation of gage in Apr 1997, at least 10% of contributing drainage area has been regulated by Lake Mexia (station 08110300) and Lake Limestone (station 08110470). There are numerous diversions above station for irrigation, municipal supply and oil field operations.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,600 ft³/s, Jan 9 (gage height, 19.00 ft); minimum discharge, 9.2 ft³/s, Oct 5-6 (gage height, 1.60 ft).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e14	68	104	e115	2770	234	59	69	60	67	51
2	11	e13	58	90	e110	3170	448	53	67	59	63	51
3	11	e13	67	86	105	3530	497	48	66	58	62	52
4	11	e13	97	84	98	2900	450	44	66	60	63	53
5	10	e13	100	84	94	1150	423	41	66	61	65	50
6	10	e14	78	175	92	463	389	38	66	60	65	46
7	11	e15	57	2110	86	285	210	37	65	59	73	50
8	13	e18	52	16900	81	212	107	36	66	57	91	51
9	15	e22	71	22700	79	177	100	34	66	56	87	51
10	18	e31	85	16600	278	152	279	38	66	56	74	50
11	16	51	83	10200	1290	126	396	89	66	55	67	61
12	16	50	59	7400	2250	108	227	102	66	54	64	85
13	27	63	46	4730	3440	99	101	91	66	54	64	113
14	110	68	39	2040	5090	98	74	75	65	55	71	132
15	124	65	36	777	5190	114	68	72	64	56	87	132
16	75	61	36	425	3450	162	65	73	63	56	92	265
17	38	58	37	272	2060	419	62	73	62	59	84	359
18	24	48	35	189	1210	972	59	72	61	60	69	297
19	19	40	34	147	802	1290	56	71	61	62	66	283
20	17	35	39	127	839	1450	52	69	61	63	64	150
21	16	31	120	121	1200	1500	59	68	61	62	61	64
22	15	28	403	917	1480	1530	60	67	61	59	56	38
23	16	26	719	1750	1710	1520	58	67	61	54	54	30
24	16	24	1070	1430	2110	1460	55	66	60	55	56	24
25	17	23	1630	786	2190	898	50	67	60	55	56	20
26	16	23	1780	384	2040	292	48	67	60	55	55	18
27	15	23	1430	245	2170	144	61	65	60	55	54	18
28	14	24	735	174	2460	113	84	61	60	55	53	17
29	13	34	347	144	---	106	78	60	59	58	52	16
30	e14	53	194	127	---	97	65	61	60	63	52	15
31	e14	---	132	123	---	125	---	68	---	68	53	---
TOTAL	753	994	9737	91441	42119	27432	4915	1932	1900	1799	2040	2642
MEAN	24.3	33.1	314	2950	1504	885	164	62.3	63.3	58.0	65.8	88.1
MAX	124	68	1780	22700	5190	3530	497	102	69	68	92	359
MIN	10	13	34	84	79	97	48	34	59	54	52	15
AC-FT	1490	1970	19310	181400	83540	54410	9750	3830	3770	3570	4050	5240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998z, BY WATER YEAR (WY)

	1997	1998	1998z	1997	1998	1998z	1997	1998	1998z	1997	1998	1998z
MEAN	24.3	33.1	314	2950	1504	885	1113	522	778	58.4	69.5	73.5
MAX	24.3	33.1	314	2950	1504	885	2063	981	1492	58.7	73.1	88.1
(WY)	1998	1998	1998	1998	1998	1998	1997	1997	1997	1997	1997	1998
MIN	24.3	33.1	314	2950	1504	885	164	62.3	63.3	58.0	65.8	59.0
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1997

SUMMARY STATISTICS

FOR 1998 WATER YEAR

WATER YEARS 1997 - 1998z

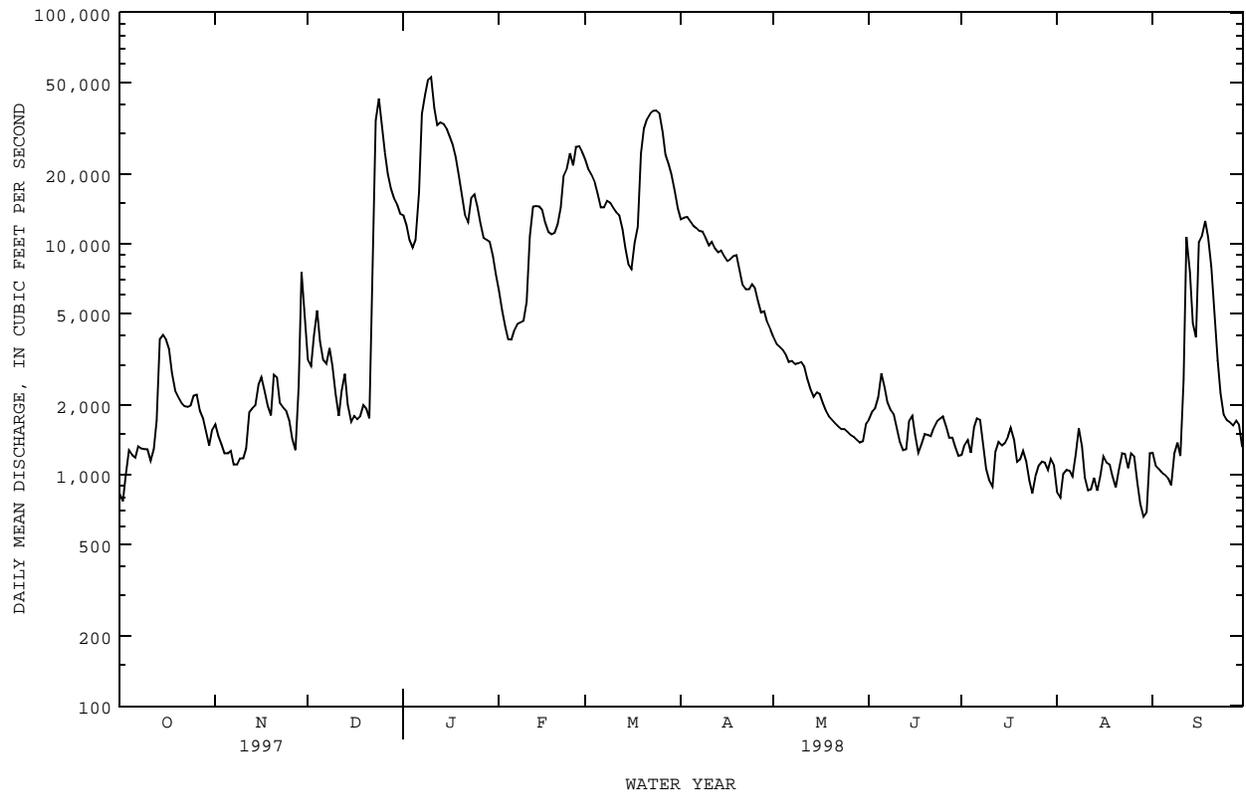
ANNUAL TOTAL	187704	
ANNUAL MEAN	514	514
HIGHEST ANNUAL MEAN		514
LOWEST ANNUAL MEAN		514
HIGHEST DAILY MEAN	22700	22700
LOWEST DAILY MEAN	10	10
ANNUAL SEVEN-DAY MINIMUM	11	11
INSTANTANEOUS PEAK FLOW	23600	23600
INSTANTANEOUS PEAK STAGE	19.00	19.00
ANNUAL RUNOFF (AC-FT)	372300	372600
10 PERCENT EXCEEDS	1290	1520
50 PERCENT EXCEEDS	65	71
90 PERCENT EXCEEDS	18	27

e Estimated

z Period of regulated streamflow.

BRAZOS RIVER BASIN

08111500 BRAZOS RIVER NEAR HEMPSTEAD, TX--Continued



08114000 BRAZOS RIVER AT RICHMOND, TX

LOCATION.--Lat 29°34'56", long 95°45'27", Fort Bend County, Hydrologic Unit 12070104, on right bank at upstream side of downstream bridge on U.S. Highway 90 in Richmond, 850 ft downstream from Texas and New Orleans Railroad Co. bridge, and at mile 92.0.

DRAINAGE AREA.--45,007 mi², approximately, of which 9,566 mi² probably is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Jan 1903 to Jun 1906, Oct 1922 to current year. Published as "at Rosenberg" Oct 1922 to Sep 1931. Jun to Nov 1901 and Jun to Sep 1902 in U.S. Department of Agriculture, Office of Experiment Stations, Bulletin Nos. 119 and 133. Gage-height records collected in this vicinity since 1914 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1392: 1933. WSP 1632: 1958. WDR TX-76-2: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 27.94 ft above sea level. Prior to Oct 1, 1922, various types of nonrecording gages at railroad bridge 925 ft upstream at different datums. Oct 1, 1922 to Sep 30, 1931, nonrecording chain gage at Rosenberg 7.6 mi upstream at datum about 17 ft higher; Oct 1, 1931, to Sep 30, 1975, water-stage recorder present site at datum 13.00 ft higher; Oct 1, 1975, to Dec 31, 1988, water-stage recorder at present site and at datum 10.00 ft higher. Satellite telemeter at station.

REMARKS.--Records good. Since water year 1941, at least 10% of contributing drainage area has been regulated by five upstream reservoirs with a combined capacity of 4,955,000 acre-ft. Flow is also affected by discharge from the flood-detention pools of 147 floodwater-retarding structures with a combined detention capacity of 153,200 acre-ft. These structures control runoff from 451 mi² above station. Considerable water is diverted above station for irrigation and for municipal supply.

AVERAGE DISCHARGE FOR PERIOD PRIOR TO REGULATION.--20 years (water years 1904-05, 1923-40) 7,209 ft³/s (5,223,000 acre-ft/yr).

EXTREMES FOR PERIOD PRIOR TO REGULATION (WATER YEARS, 1904-05, 1923-40).--Maximum discharge, 123,000 ft³/s Jun 6, 1929 (gage height, 53.6 ft, from floodmark), present site and datum; minimum daily, 35 ft³/s Aug 23, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1852, 61.2 ft Dec 10, 1913, present datum, from floodmarks on right bank 1,000 ft upstream from gage. From information by Texas and New Orleans Railroad Co., stages of other floods at railroad bridge, present datum, are as follows: May 1884, 56.7 ft; Jun 13, 1885, 57.7 ft; Jul 1899, 58.6 ft; May 2, 1915, 56.3 ft; and May 9, 1922, 53.9 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1500	1690	10800	12700	8830	28100	14500	4690	1490	1250	784	1040
2	1370	1740	6820	12400	7860	23900	13200	4430	1650	1130	826	890
3	1270	1850	5950	11800	6950	20900	13000	4170	1770	1160	672	1130
4	1190	1720	7150	10700	6120	19800	13000	4080	1820	1210	631	1100
5	1240	1690	7790	9950	5510	17800	12600	3960	1930	1320	713	1100
6	1590	1610	6930	10700	5150	e17700	12200	3800	2250	1210	836	1110
7	1720	1480	5120	20300	5220	e17100	11900	3620	2530	1330	956	1140
8	1720	1470	5690	37900	5520	e16400	11700	3480	2310	1560	1030	1170
9	2150	1430	7470	45200	5610	e15800	11500	3420	2010	1530	1050	1090
10	2360	1340	6630	50100	5840	15300	11200	3340	1850	1310	1300	1280
11	3170	1420	4840	52200	6140	14700	10500	3350	1760	1090	1210	4220
12	3370	1770	3870	43900	9050	14100	10400	3300	1610	905	882	4520
13	5100	2210	3330	35000	13400	13800	10300	3090	1470	805	761	11200
14	8880	2930	3550	33300	13800	12900	9680	2880	1330	955	708	12300
15	9510	2780	3650	32300	13600	11400	9720	2670	1300	1230	789	8070
16	8540	2530	3190	30500	13600	10600	9610	2540	1590	1250	835	7220
17	5530	2750	2900	28100	13300	10700	9040	2560	1760	1250	873	9710
18	4430	2850	2880	25400	12600	11500	8930	2520	1540	1400	1130	12500
19	3860	2610	2830	22100	12200	13100	9250	2360	1330	1490	1080	12800
20	3210	2340	2920	18700	11600	23200	9420	2210	1220	1410	1070	11300
21	2770	2200	4010	15800	11900	30800	8860	2110	1330	1160	1020	9050
22	2570	2750	3630	13800	16300	33900	7530	1980	1290	1020	1100	6730
23	2550	2760	8500	12600	22900	35900	6720	1870	1330	1070	1140	4780
24	2430	2350	32300	14100	24500	36800	6560	1820	1440	1060	1140	3570
25	2360	2190	41100	15300	25500	36900	6710	1780	1590	925	1160	2820
26	2320	2110	34900	14200	24000	35800	6790	1760	1570	803	1060	2390
27	2410	1930	24900	12700	34000	30300	6260	1750	1610	816	1120	2260
28	2420	1770	19100	11300	34100	23800	5600	1680	1500	954	1120	2160
29	2190	2520	16200	10700	---	20900	5270	1610	1400	1000	848	2070
30	2040	9020	14600	10600	---	18900	5170	1570	1290	874	739	2110
31	1890	---	13700	9890	---	16700	---	1510	---	812	1050	---
TOTAL	97660	69810	317250	684240	375100	649500	287120	85910	48870	35289	29633	142830
MEAN	3150	2327	10230	22070	13400	20950	9571	2771	1629	1138	956	4761
MAX	9510	9020	41100	52200	34100	36900	14500	4690	2530	1560	1300	12800
MIN	1190	1340	2830	9890	5150	10600	5170	1510	1220	803	631	890
AC-FT	193700	138500	629300	1357000	744000	1288000	569500	170400	96930	70000	58780	283300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998z, BY WATER YEAR (WY)

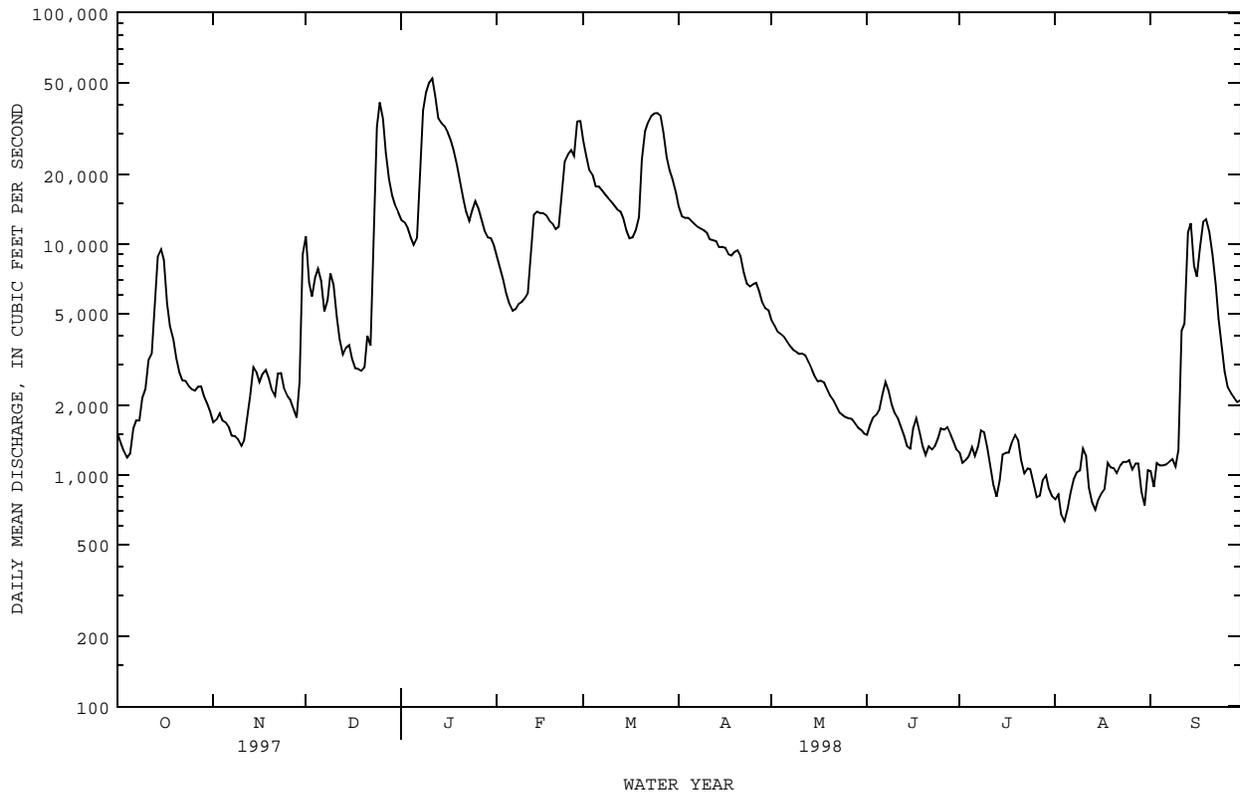
	5008	5356	6994	8135	9005	9183	9476	15340	12080	4965	2601	3293
MEAN	5008	5356	6994	8135	9005	9183	9476	15340	12080	4965	2601	3293
MAX	28760	32360	52860	60500	54410	54050	41900	77200	58350	17100	11800	19850
(WY)	1958	1975	1941	1992	1992	1992	1945	1957	1957	1968	1995	1974
MIN	203	366	480	543	702	445	800	819	786	717	550	414
(WY)	1953	1989	1955	1952	1971	1954	1996	1996	1956	1956	1963	1954

BRAZOS RIVER BASIN

08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998z	
ANNUAL TOTAL	5029870		2823212		7610	
ANNUAL MEAN	13780		7735		26620	
HIGHEST ANNUAL MEAN					1403	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	60800	Mar 14	52200	Jan 11	118000	May 5 1957
LOWEST DAILY MEAN	1190	Oct 4	631	Aug 4	55	Jul 5 1956
ANNUAL SEVEN-DAY MINIMUM	1400	Sep 30	753	Jul 31	93	Jul 4 1956
INSTANTANEOUS PEAK FLOW			53000	Jan 11	119000	May 5 1957
INSTANTANEOUS PEAK STAGE			38.10	Jan 11	50.30	Oct 21 1994
ANNUAL RUNOFF (AC-FT)	9977000		5600000		5513000	
10 PERCENT EXCEEDS	36900		20000		19200	
50 PERCENT EXCEEDS	8100		3190		2940	
90 PERCENT EXCEEDS	1890		1080		784	

e Estimated
z Period of regulated streamflow.



08114000 BRAZOS RIVER AT RICHMOND, TX--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses: Oct 1941 to current year. Chemical and biochemical analyses: Jan 1968 to current year. Pesticide analyses: Oct 1967 to May 1982. Sediment analyses: Apr 1957 to Sep 1996.

PERIOD OF DAILY RECORD.--Specific conductance: Oct 1941 to Sep 1995. Water temperature: Nov 1950 to September 1995. Suspended-sediment discharge: Jan 1966 to Sep 1986.

REMARKS.--Mean monthly and annual concentrations and loads for selected chemical constituents have been computed using the daily (or continuous) records of specific conductance and regression relationships between each chemical constituent and specific conductance. Regression equations developed for this station may be obtained from the U.S. Geological Survey District Office upon request.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,600 microsiemens, Sep 4, 1978; minimum daily, 152 microsiemens, Oct 19, 1994.

WATER TEMPERATURE: Maximum daily, 33.0°C, Aug 5, 1951; minimum daily, 1.0°C, Jan 8, 1970 and Dec 23-24, 1989.

SEDIMENT CONCENTRATION: Maximum daily mean, 13,500 mg/L, Apr 4, 1979; minimum daily mean, 8 mg/L, Nov 29, 1967, Sep 20, and Oct 6, 7, 1980.

SEDIMENT LOAD: Maximum daily, 1,860,000 tons Apr 4, 1979; minimum daily, 9.8 tons Oct 11, 1983.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (000061)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) UNITS (00400)	TEMPER-ATURE WATER (DEG C) (00010)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L) (00900)	HARD-NESS DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L) (AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L) (AS MG) (00925)	
FEB	09...	0940	5650	680	8.2	14.5	9.6	95	220	43	67	14
APR	20...	0900	9330	550	8.2	19.5	8.5	92	190	38	59	11
JUN	09...	0912	2040	884	8.0	28.5	7.4	96	210	47	58	16
AUG	06...	0910	947	970	8.0	31.0	6.5	88	210	53	54	18

DATE	SODIUM, DIS-SOLVED (MG/L) (AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L) (AS K) (00935)	ALKA-LINITY WAT DIS-FIX END CAC03 (MG/L) (39036)	SULFATE DIS-SOLVED (MG/L) (AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L) (AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L) (AS F) (00950)	SILICA, DIS-SOLVED (MG/L) (AS SIO2) (00955)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L) (AS N) (00618)	
FEB	09...	49	1	3.6	180	54	67	.26	10	375	--
APR	20...	33	1	3.6	160	36	47	.26	6.9	293	--
JUN	09...	94	3	4.5	160	81	130	.30	9.5	493	.106
AUG	06...	103	3	4.8	160	85	150	.32	11	517	--

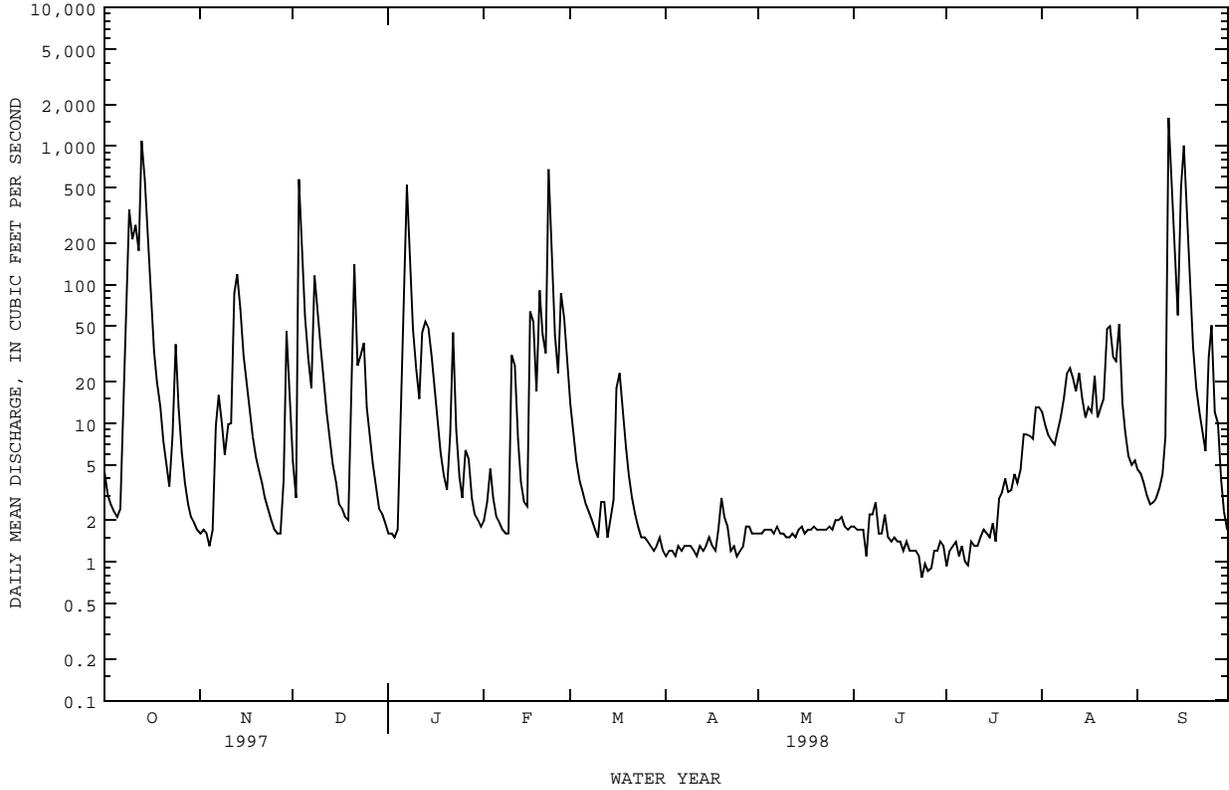
DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L) (AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) (AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) (AS N) (00608)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L) (AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L) (AS N) (00623)	PHOS-PHORUS, DIS-SOLVED (MG/L) (AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L) (AS P) (00671)	PHOS-PHATE, DIS-SOLVED (MG/L) (AS PO4) (00660)	ARSENIC, DIS-SOLVED (MG/L) (AS AS) (01000)	BARIUM, DIS-SOLVED (MG/L) (AS BA) (01005)	
FEB	09...	<.010	.812	.026	.17	.20	.046	.060	.18	--	--
APR	20...	<.010	.735	.043	.21	.26	.011	.023	.07	--	--
JUN	09...	.012	.118	<.020	--	.31	.035	<.010	--	2	129
AUG	06...	<.010	<.050	.029	.26	.29	.021	.017	.05	3	139

DATE	CADMIUM, DIS-SOLVED (UG/L) (AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L) (AS CR) (01030)	COPPER, DIS-SOLVED (UG/L) (AS CU) (01040)	IRON, DIS-SOLVED (UG/L) (AS FE) (01046)	LEAD, DIS-SOLVED (UG/L) (AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L) (AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L) (AS HG) (71890)	SELE-NIUM, DIS-SOLVED (UG/L) (AS SE) (01145)	SILVER, DIS-SOLVED (UG/L) (AS AG) (01075)	ZINC, DIS-SOLVED (UG/L) (AS ZN) (01090)
FEB	09...	--	--	--	--	--	--	--	--	--
APR	20...	--	--	--	--	--	--	--	--	--
JUN	09...	<1.0	<1.0	<1.0	<10	<1.0	<3.0	<.1	<1	<1.0
AUG	06...	<1.0	<1.0	2.9	<10	<1.0	<4.0	<.1	<1	<1.0

08115000 BIG CREEK NEAR NEEDVILLE, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1947 - 1998	
ANNUAL TOTAL	21181.6		13210.27		36.1	
ANNUAL MEAN	58.0		36.2		91.1	
HIGHEST ANNUAL MEAN					3.18	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	1650	Apr 4	1600	Sep 11	7080	Jun 26 1960
LOWEST DAILY MEAN	1.3	Feb 6	.77	Jun 23	.00	Jun 13 1947
ANNUAL SEVEN-DAY MINIMUM	1.6	Oct 30	1.0	Jun 20	.00	Jun 13 1947
INSTANTANEOUS PEAK FLOW			1990	Sep 11	10400	Jun 26 1960
INSTANTANEOUS PEAK STAGE			21.33	Sep 11	24.23	Oct 18 1994
ANNUAL RUNOFF (AC-FT)	42010		26200		26140	
10 PERCENT EXCEEDS	146		53		50	
50 PERCENT EXCEEDS	4.7		3.0		1.7	
90 PERCENT EXCEEDS	2.0		1.3		.06	

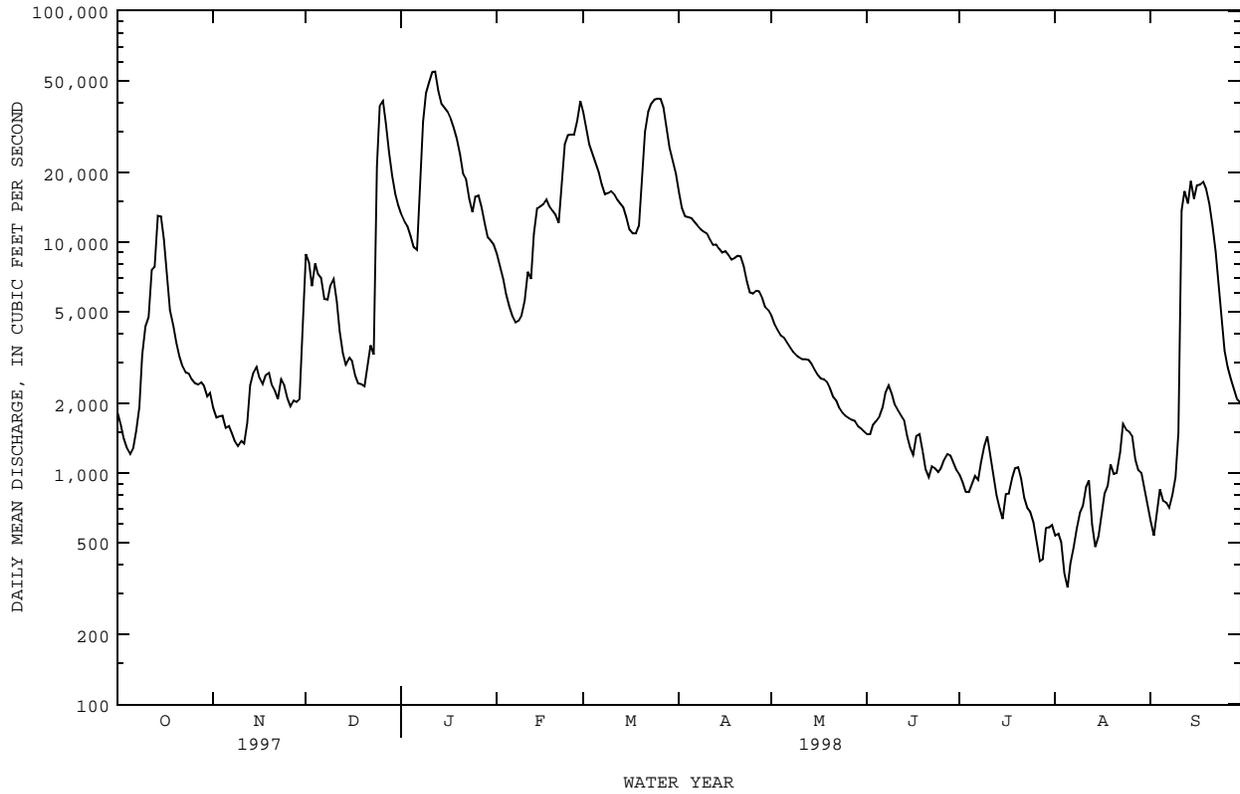
e Estimated



08116650 BRAZOS RIVER NEAR ROSHARON, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1967 - 1998z	
ANNUAL TOTAL	5365300		3073782		8617	
ANNUAL MEAN	14700		8421		29050	
HIGHEST ANNUAL MEAN					1634	
LOWEST ANNUAL MEAN					1978	
HIGHEST DAILY MEAN	63300	Mar 15	54800	Jan 12	83900	Oct 22 1994
LOWEST DAILY MEAN	1210	Oct 5	320	Aug 5	36	May 22 1996
ANNUAL SEVEN-DAY MINIMUM	1440	Nov 5	451	Aug 1	44	Apr 4 1967
INSTANTANEOUS PEAK FLOW			57300	Jan 11	84400	Oct 22 1994
INSTANTANEOUS PEAK STAGE			42.07	Jan 11	51.89	Jan 3 1992
ANNUAL RUNOFF (AC-FT)	10640000		6097000		6242000	
10 PERCENT EXCEEDS	40400		23100		21900	
50 PERCENT EXCEEDS	8030		3160		3430	
90 PERCENT EXCEEDS	1830		813		710	

e Estimated
z Period of regulated streamflow.



SAN BERNARD RIVER BASIN

08117500 SAN BERNARD RIVER NEAR BOLING, TX

LOCATION.--Lat 29°18'48", long 95°53'37", Wharton-Fort Bend County line, Hydrologic Unit 12090401, on left bank at downstream side of bridge on Farm Road 442, 2.5 mi downstream from Snake Creek, and 4.5 mi northeast of Boling.

DRAINAGE AREA.--727 mi².

PERIOD OF RECORDS.--May 1954 to current year.

Water-quality records.--Chemical and biochemical analyses: Feb 1978 to Sep 1986.

REVISED RECORDS.--WSP 1712: 1958. WSP 1922: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 30.81 ft above sea level. Satellite telemeter at station.

REMARKS.--Records good. No known regulation. Part of low flow is drainage from areas irrigated with diversions from the Colorado River. There are numerous diversions above station for irrigation and for other uses.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1900, 43.5 ft in 1913 (probably Dec). Flood in Sep 1938 reached a stage of 43.3 ft, from information by local resident.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 14	1100	10,000	29.84	Sep 12	0400	7,390	26.54
Dec 4	1300	3,100	18.27	Sep 17	0200	8,970	28.59

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	149	843	446	101	2770	62	157	80	87	149	94
2	149	151	608	303	124	2760	59	142	91	92	111	63
3	118	160	1390	219	136	1850	55	120	93	96	90	48
4	93	141	3020	172	108	1130	51	112	76	112	94	44
5	80	115	2830	184	95	754	50	116	60	138	105	51
6	78	134	2550	355	90	494	46	131	52	152	126	65
7	137	112	2340	1980	83	322	43	168	58	144	168	76
8	901	92	1800	2430	77	229	41	185	120	133	160	84
9	1660	79	1400	2360	77	178	39	170	146	124	168	89
10	1910	106	1240	2230	105	150	37	168	151	122	169	142
11	2560	193	1090	1780	143	153	45	156	146	106	144	4770
12	3180	451	1240	1260	138	161	64	144	130	e93	143	6880
13	4820	1010	1130	1150	118	134	89	132	108	87	136	4790
14	9590	1060	842	1270	102	116	108	117	86	76	119	3800
15	7440	792	581	1080	95	106	142	99	80	80	102	3830
16	5460	557	377	683	170	167	182	99	67	81	103	7240
17	4520	423	249	456	395	777	197	101	63	64	111	8250
18	3720	327	182	317	512	1010	193	96	63	75	107	6100
19	2380	244	144	230	606	1060	175	101	64	95	91	5050
20	1090	183	124	178	640	1100	224	91	47	128	77	4380
21	644	147	593	211	664	1170	252	83	38	141	76	3730
22	406	124	1320	558	2150	919	192	81	36	155	204	2710
23	281	107	1100	414	1690	612	132	65	37	169	394	1430
24	282	94	943	428	1490	360	108	61	46	184	693	901
25	235	84	1250	379	2310	213	93	78	49	194	893	634
26	188	75	1210	375	2570	145	78	95	45	206	720	414
27	160	68	1200	328	2290	111	63	96	45	190	541	287
28	153	64	1500	233	2120	92	64	90	50	179	390	235
29	150	120	1290	173	---	81	100	104	66	207	263	220
30	151	637	928	135	---	72	148	97	75	204	177	206
31	146	---	655	113	---	67	---	88	---	182	127	---
TOTAL	52884	7999	35969	22430	19199	19263	3132	3543	2268	4096	6951	66613
MEAN	1706	267	1160	724	686	621	104	114	75.6	132	224	2220
MAX	9590	1060	3020	2430	2570	2770	252	185	151	207	893	8250
MIN	78	64	124	113	77	67	37	61	36	64	76	44
AC-FT	104900	15870	71340	44490	38080	38210	6210	7030	4500	8120	13790	132100

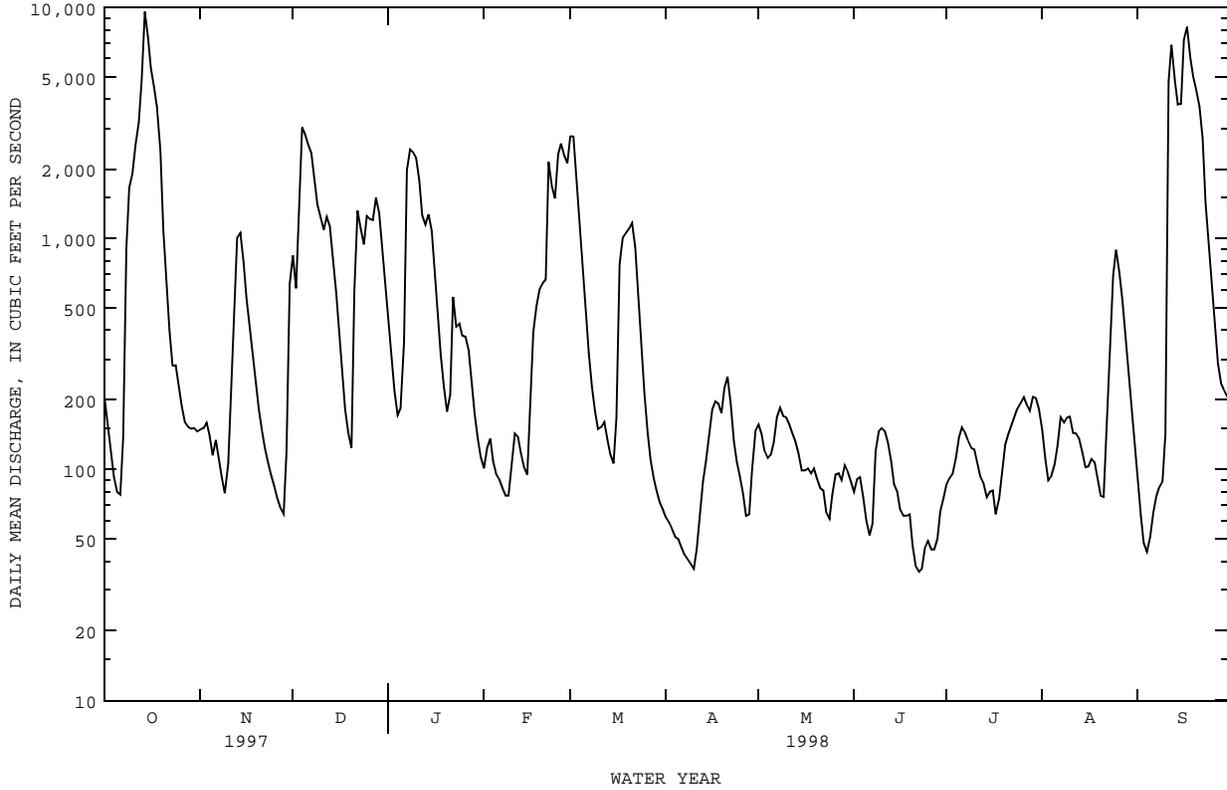
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1998, BY WATER YEAR (WY)

	586	459	460	583	695	419	507	657	860	328	209	641
MEAN	586	459	460	583	695	419	507	657	860	328	209	641
MAX	4048	4072	2497	2316	4303	2680	3348	2840	5083	1417	710	3794
(WY)	1995	1986	1992	1979	1992	1997	1973	1972	1993	1961	1983	1979
MIN	3.27	5.23	6.19	6.57	15.2	5.97	15.2	22.8	10.4	10.7	26.8	35.2
(WY)	1957	1956	1990	1957	1967	1956	1963	1956	1956	1956	1956	1956

08117500 SAN BERNARD RIVER NEAR BOLING, TX--Continued

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1954 - 1998	
ANNUAL TOTAL	439871		244347		536	
ANNUAL MEAN	1205		669		1357	
HIGHEST ANNUAL MEAN					37.9	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	9590	Oct 14	9590	Oct 14	21000	Jun 28 1960
LOWEST DAILY MEAN	57	Sep 9	36	Jun 22	1.7	Dec 7 1988
ANNUAL SEVEN-DAY MINIMUM	67	Sep 4	42	Jun 21	2.2	Dec 1 1988
INSTANTANEOUS PEAK FLOW			10000	Oct 14	21200	Jun 28 1960
INSTANTANEOUS PEAK STAGE			29.84	Oct 14	42.41	Jun 28 1960
ANNUAL RUNOFF (AC-FT)	872500		484700		388300	
10 PERCENT EXCEEDS	3490		1940		1330	
50 PERCENT EXCEEDS	464		152		124	
90 PERCENT EXCEEDS	110		65		18	

e Estimated



Because the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than continuous stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage of those events. The data collected for special reasons are called measurements at miscellaneous sites.

Streamflow data collected at partial-record stations where water-quality data other than observations of water temperature are not obtained are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and (or) discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low and high flows are given in a third table. Discharge measurements and water-quality data collected at partial-record stations are presented in downstream order in the section of this report entitled "Gaging-station records."

Low-flow partial-record stations

Measurements of streamflow at low-flow partial-record stations that are not published in the gaging-station section are given in the following table. Most of the measurements of low flow were made during periods when streamflow was sustained primarily by ground-water discharge. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will indicate the low-flow potential of the stream. The years listed in the column headed "Period of record" identifies the water years in which measurements were made at the same or at practically the same site.

Discharge measurements made at low-flow partial-record station during water year 1998

Station number	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Brazos River Basin						
08084100	Deadman Creek near Nugent, Tex.	Lat 32°40'36", long 99°37'00", Jones County, at low-water crossing on county road, 3.2 mi east of Nugent, and 4.4 mi upstream from Clear Fork Brazos River.	163	1967-98	10-06-97 12-04-97 02-05-98 04-15-98 05-29-98 08-06-98	10.4 20.2 21.7 18.9 6.88 5.01
08104795	North Fork San Gabriel River upstream from State Highway 418 at Georgetown, Tex.	Lat 30°38'44", long 97°40'49", Williamson County, 0.2 mi upstream from State Highway 418 at Georgetown.	271	1984-88, 1990-98	10-20-97 11-05-97 12-17-97 04-13-98 05-01-98 06-04-98 07-28-98	9.50 9.23 7.03 43.0 37.6 7.62 6.24
08104950	South Fork San Gabriel River upstream from State Hwy 418 at Georgetown, Tex.	Lat 30°38'38", long 97°40'50", Williamson County, 0.2 mi upstream from State Highway 418 at Georgetown.	136	1984-88, 1990-98	10-20-97 11-05-97 12-17-97 04-13-98 05-01-98 06-04-98 07-28-98	4.82 2.82 6.55 68.2 41.0 4.63 0.21
08105000	San Gabriel River at Georgetown, Tex.	Lat 30°39'14", long 97°39'18", Williamson County, on left bank 100 ft downstream from Missouri-Kansas Railroad bridge, 1.2 mi below confluence of North and South Forks, about 1.5 mi northeast of Williamson County Courthouse in Georgetown.	399	1924-25, 1934-73†, 1984-87†, 1988, 1990-98	10-20-97 11-05-97 12-17-97 04-13-98 05-01-98 06-04-98 07-28-98	41.7 29.5 33.4 143 103 34.5 10.1
08105095	Berry Creek upstream from IH-35 near Georgetown, Tex.	Lat 30°42'11", long 97°39'58", Williamson County, about 1.4 mi upstream from IH-35 near Georgetown.	71.4	1984-88, 1990-98	10-20-97 11-05-97 12-17-97 04-13-98 05-01-98 06-04-98 07-28-98	0.00 0.00 0.00 76.2 9.31 0.00 0.00
08105160	Dry Berry Creek near Georgetown, Tex.	Lat 30°41'28", long 97°38'14", Williamson County, at downstream side of county road, 0.4 mi upstream from mouth, and 4.0 mi northeast of Georgetown.	33.1	1986-88, 1990-98	10-20-97 11-05-97 12-17-97 04-13-98 05-01-98 06-04-98 07-28-98	0.02 0.02 0.00 2.04 0.72 0.01 0.00

Station number	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Brazos River Basin--Continued						
08105200	Berry Creek at State Highway 971 near Georgetown, Tex.	Lat 30°40'33", long 97°36'52", Williamson County, at downstream side of State Highway 971 bridge and 4.7 mi northeast of Georgetown.	117	1964-73, 1984-87†, 1988, 1990-98	10-20-97	9.98
					11-05-97	7.38
					12-17-97	9.06
					04-13-98	52.8
					05-01-98	36.4
					06-04-98	15.0
07-28-98	3.40					
08105300	San Gabriel River near Weir, Tex.	Lat 30°38'45", long 97°35'06", Williamson County, on left bank at downstream side of State Highway 29 bridge, 0.5 mi upstream from Manske Branch, 4.7 mi east of Georgetown, 2.0 mi south of Weir, and 54.8 mi upstream from mouth.	563	1976-90, 1991-98	10-20-97	46.0
					10-27-97	47.7
					11-05-97	38.7
					12-17-97	48.8
					04-13-98	221
					05-01-98	142
					06-04-98	51.7
					07-28-98	21.2

† Operated as a continuous-record station.

Crest-stage partial-record stations

The following table contains annual maximum stage and (or) discharge at partial-record stations operated primarily for the purpose of defining the flooding characteristics of the streams. At stations where discharge is given, or is footnoted "to be determined", a stage-discharge relation has been, or will be, defined by discharge measurements obtained by current meter or by indirect procedures. Water-stage recorders are located at these flood-hydrograph stations to facilitate complete hydrograph definition. At stations where only the maximum stage is given (discharge column is dashed), the data are generally collected for use in stage-frequency studies or definition of flood-profiles. Gages at these stations usually consist of a device that will register the peak stage occurring between inspection of the gage. The years used in the column "Period of record" identify the years in which the annual maximum has been determined.

Annual maximum stage and (or) discharge during water year 1998

Station name and number	Location	Period of record	Water Year 1998 maximum			Period of record maximum			
			Date	Gage height (ft)	Discharge (ft ³ /s)	Date	Gage height (ft)	Discharge (ft ³ /s)	
San Jacinto River Basin									
Goose Creek at Baytown, Tex. 08067525	Lat 29°46'14", long 94°59'58", Harris County, at bridge on Baker Road in Baytown, 1.1 mi upstream from West Fork Goose Creek, and 2.0 mi upstream from East Fork Goose Creek. Drainage Area is 15.8 mi ² .	1986-98	01-22-98	*23.47	--	01-22-98	*23.47	--	
Willow Creek near Tomball, Tex. 08068325	Lat 30°06'19", long 95°32'47", Harris County, at bridge on Kuykendahl Road, 0.6 mi upstream from Cannon Gully, and 4.0 mi east of Tomball. Drainage area is 41.0 mi ² .	1984-98	01-07-98	29.36	1,920	10-18-94	31.81	4,070	
Cypress Creek at Sharp Road near Hockley, Tex. 08068700	Lat 29°55'15", long 95°50'24", Harris County, at bridge on Sharp Road and 7.4 mi south of Hockley. Drainage area is 80.7 mi ² .	1976-78 1979-98	01-08-98	*65.71	--	10-18-94	*69.86	--	
Buffalo Bayou near Fulshear, Tex. 08072350	Lat 29°43'22", long 95°46'01", Harris County, at proposed location of Peek Road bridge, about 200 ft downstream from Little Prong Bayou, 4,300 ft upstream from Mason Road, 8.3 mi east-northeast of Fulshear. Drainage area is 81.7 mi ² .	1986-98	09-11-98	13.81	--	02-21-94	r15.84	--	
South Mayde Creek near Addicks, Tex. 08072700	Lat 29°48'03", long 95°41'33", Harris County, at bridge on Groeschke Road, 3.2 mi west of Addicks, and 4.6 mi upstream from Langham Creek. Drainage area is 32.3 mi ² .	1974-98	09-11-98	*107.65	--	08-31-81	108.76	4,080	
Langham Creek near Addicks, Tex. 08072800	Lat 29°50'08", long 95°37'32", Harris County, at bridge on Clay Road, 3.6 mi north of Addicks, and 4.4 mi upstream from mouth. Drainage area is 48.9 mi ² .	1974-98	09-11-98	*100.83	--	08-31-81	102.25	3,360	
Whiteoak Bayou at Alabonson Road at Houston, Tex. 08074020	Lat 29°52'14", long 95°28'49", Harris County, at bridge on Alabonson Road, in northwest Houston, 1.0 mi upstream from Vogel Creek and 2.5 mi upstream from Cole Creek. Drainage area is 34.5 mi ² .	1984-98	09-11-98	48.54	13,300	09-11-98	48.54	13,300	
Little Whiteoak Bayou at Trimble Street at Houston, Tex. 08074540	Lat 29°47'33", long 95°22'06", Harris County, at bridge on Trimble Street in Houston. Drainage area is 18.0 mi ² .	1979-98	09-11-98	*41.46	--	03-04-92	43.17	--	
Brays Bayou at Alief, Tex. 08074760	Lat 29°42'39", long 95°35'13", Harris County, at bridge on High Star Street in Alief. Drainage area is 14.1 mi ² .	1977-98	09-11-98	13.98	--	03-04-92	21.16	--	
Keegans Bayou at Keegan Road near Houston, Tex. 08074780	Lat 29°39'55", long 95°35'42", Harris County, at bridge on Keegan Road and about 16 mi southwest of Houston. Drainage area is 8.63 mi ² .	1965-71, 1975-98	09-11-98	*78.58	--	04-14-66	83.55	--	
Brays Bayou at Gessner Drive, Houston, Tex. 08074810	Lat 29°40'21", long 95°31'41", Harris County, at bridge on Gessner Drive in southwest Houston and 0.10 mi below mouth of Keegans Bayou. Drainage area is 53.2 mi ² .	1977-98	09-11-98	*61.12	11,300	03-04-92	65.42	16,900	

See footnote at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum stage and (or) discharge during water year 1998--Continued

Station name and number	Location	Period of record	Water Year 1998 maximum			Period of record maximum			
			Date	Gage height (ft)	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)	
San Jacinto River Basin--Continued									
Greens Bayou at Cutten Road near Houston, Tex. 08075780	Lat 29°56'56", long 95°31'10", Harris County, at bridge on Cutten Road and about 16.5 mi northwest of Houston. Drainage area is 8.65 mi ² .	1965-98	09-11-98	*114.44	971	02-21-69 10-25-84	*118.04 *116.85	508 2,110	
Carpenters Bayou at IH-10 near Cahnnelview, Tex 08076902	Lat 29°46'18", long 95°08'56", Harris County, at bridge on eastbound access road to IH-10, at western boundary of Channelview, 4.4 mi upstream from mouth. Drainage area is 25.9 mi ² .	1991-98	01-22-98	*15.54	--	10-17-94	*17.53	--	
Clear Creek Basin									
Beamer Street Ditch at Houston, Tex. 08077505	Lat 29°35'30", long 95°13'19", Harris County, at bridge on Hughes Road in southeast Houston. Drainage area is 5.19 mi ² .	1984-98	09-11-98	*29.77	--	10-18-94	*31.48	--	
Turkey Creek near Friendswood, Tex. 08077520	Lat 29°35'02", long 95°11'13", Harris County, at bridge on Dixie Farm Road in southern Harris County, 2.4 mi upstream from Clear Creek, and 3.9 mi north-northeast of Friendswood. Drainage area is 6.78 mi ² .	1985-98	09-11-98	*26.03	--	10-18-94	*27.97	--	
Horsepen Bayou at Bay Area Blvd., Houston, Tex. 08077630	Lat 29°35'00", long 95°06'12", Harris County, at upstream bridge on Bay Area Blvd., in southeast Houston, and 2.0 mi upstream from Armand Bayou. Drainage area is 17.8 mi ² .	1985-98	09-11-98	*10.30	--	08-01-89	*12.35	--	

* Elevation, in feet.

r Revised.

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table:

Discharge measurements made at miscellaneous sites during water year 1998

Station number	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Brazos River Basin						
Cat Claw Creek at Abilene, Tex. 08083420	Clear Fork Brazos River	Lat 32°28'31", long 99°44'56", Taylor County, in Sear Park 320 ft downstream from bridge on Ambler Street in Abilene, and 1.8 mi upstream from mouth.	13.0	1971-79†, 1993-98	10-06-97	0
					12-04-97	0.05
					04-15-98	0
					05-29-98	0.02
					06-10-98	0
					08-06-98	0
09-23-98	0					
Cedar Creek at I-20 at Abilene, Tex. 08083480	Clear Fork Brazos River	Lat 32°29'58", long 99°42'57", Taylor County, on Cedar Creek bridge on IH-20 service road in Abilene.	136	1993-98	10-06-97	0
					12-04-97	1.15
					02-02-98	3.90
					04-15-98	0.37
					08-06-98	0
					08-07-98	0
Bosque River at Waco, Tex. 08095600	Brazos River	Lat 31°36'04", long 97°11'36", McLennan County, at bridge on 19th Street in Waco.	1,655	1959-85†, 1998	02-11-98	1,860
					03-26-98	4,840
Leon River at North Ft. Hood, Tex. 08100600	Brazos River	Lat 31°23'01", long 97°42'06", Coryell County, on downstream side of State Highway 36 in North Fort Hood, and 9.8 mi downstream from City of Gatesville Sewage Disposal Plant.	2,416	1990-98	10-28-97	123
					01-14-98	214
					02-12-98	133
					05-06-98	250
					06-30-98	34.3
					08-03-98	23.7
Berry Creek at County Road 152 nr Georgetown, Tex.	San Gabriel River	Lat 30°40'52", long 97°38'24", Williamson County, at bridge on County Road 152, and 3.0 mi northeast of Georgetown.	--	--	07-28-98	6.50

† Operated as a continuous-record station.

INDEX

	Page		Page
Addicks Reservoir near Addicks	81	Crest-stage partial-record stations	317-318
Aquilla Creek near Aquilla	215-216	Cypress Creek at Grant Road near Cypress	44
Aquilla Lake above Aquilla	214	at House and Hahl Road near Cypress	42
Barker Reservoir near Addicks	77	at Katy-Hockley Road near Hockley	41
Beamer Street Ditch at Houston	318	at Sharp Road near Hockley	317
Bear Creek near Barker	78-79	at Stuebner-Airline Road near Westfield	45
Belton Lake near Belton	255-269	near Westfield	46
Berry Bayou at Forest Oaks Street, Houston	126-127	Davidson Creek near Lyons	296
Berry Creek, at County Road 152 near Georgetown	319	Deadman Creek near Nugent	315
at State Highway 971 near Georgetown	316	Definition of terms	16
near Georgetown	283-284	Discharge, at partial-record stations	315-319
upstream from Interstate Highway 35 near Georgetown	315	Double Mountain Fork Brazos River, at Justiceburg	151-155
Big Creek, near Freestone	298	near Aspermont	157-159
near Needville	308-309	Dry Berry Creek near Georgetown	315
Big Sandy Creek above Breckenridge	180-186	East Fork San Jacinto River, near New Caney	51-57
Bosque River near Waco	239,319	near Cleveland	49-50
Brays Bayou, at Alief Road, Alief	317	East Yegua Creek near Dime Box	293-294
at Gessner Drive, Houston	317	Garners Bayou near Humble	138
at Houston	117-120	Goose Creek at Baytown	317
Brazos River, at Richmond	305-307	Granger Lake near Granger	285
at Seymour	162-164	Greens Bayou, at Cutten Road near Houston	318
at State Highway 21 near Bryan	291	at Ley Road, Houston	140
at Waco	240-241	near U.S. Highway 75 near Houston	133
near Aquilla	212-213	near Houston	134-137
near Dennis	201	Halls Bayou at Houston	139
near Glen Rose	203-204	Highland Bayou Basin, gaging-station records in	144-146
near Graford	198	Highland Bayou, Diversion Channel near Hitchcock	144
near Hempstead	303-304	near Hitchcock	145
near Highbank	242	Hog Creek near Crawford	227
near Palo Pinto	199-200	Horsepen Bayou at Bay Area Blvd., Houston	318
near Rosharon	310-311	Hubbard Creek below Albany	173-179
near South Bend	194-195	Hubbard Creek Reservoir near Breckenridge	187-193
Brazos River Basin, miscellaneous partial-record stations in	319	Hunting Bayou at Interstate Highway 610, Houston	129-132
gaging-station records in	151-311	Keegans Bayou, at Keegan Road near Houston	317
low-flow partial-record stations in	315-316	at Roark Road near Houston	116
Brickhouse Gully at Costa Rica Sreet, Houston	95	Lake Alan Henry Reservoir near Justiceburg	156
Buffalo Bayou, at Houston	88-93	Lake Conroe near Conroe	25-31
at McKee Street, Houston	102-108	Lake Georgetown near Georgetown	279
at Piney Point	87	Lake Graham near Graham	196
at Turning Basin, Houston	109-115	Lake Granbury near Granbury	202
at West Belt Drive, Houston	83-86	Lake Houston near Sheldon	63-73
near Addicks	82	Lake Limestone near Marquez	299
near Fulshear	317	Lake Whitney near Whitney	211
near Katy	76	LaMarque Levee Pump Station near LaMarque	146-148
California Creek near Stamford	169-170	Lampasas River near Kempner	273-274
Caney Creek near Splendora.....	58-60	Langham Creek, at West Little York Road near Addicks	80
Carpenters Bayou at IH-10 near Channelview	318	near Addicks	317
Cat Claw Creek at Abilene	319	Leon River, at Gatesville	247-248
Cedar Creek at I-20 at Abilene	319	at North Fort Hood	249,319
Chocolate Bayou near Alvin	149-150	near Belton	270-272
Chocolate River Bayou, gaging-station records in	149	near De Leon	243
Clear Creek near Friendswood	141	near Hamilton	246
Clear Creek Basin, crest-stage partial-record stations in	318	Little Cypress Creek near Cypress	43
gaging-station records in	141	Little River, at Cameron	289-290
Clear Fork Brazos River, at Fort Griffin	171-172	near Little River	277-278
at Nugent	167-168	near Rockdale	288
near Roby	166		
Coastal Basin, gaging-station records in	142		
Cole Creek at Deihl Road, Houston	94		
Cowhouse Creek at Pidcoke	251-254		

	Page		Page
Little Whiteoak Bayou at Trimble Street at Houston	317	San Jacinto River near Sheldon	74-75
Low-flow partial-record stations	315-316	San Jacinto River Basin,	
Luce Bayou above Lake Houston near Huffman	61-62	crest-stage partial-record stations in	317
Middle Bosque River near McGregor	224-226	gaging-station records in	25-140
Middle Yegua Creek near Dime Box	292	Sims Bayou, at Hiram Clarke Street, Houston	121-122
Millers Creek near Munday	165	at Houston	123-125
Moses Lake-Galveston Bay near Texas City	142-143	Somerville Lake near Somerville	295
Navasota River, above Groesbeck	297	South Fork Rocky Creek near Briggs	275
at OSR near Bryan	302	South Fork San Gabriel River at Georgetown	282
near Easterly	300-301	upstream from State Highway 418 at Georgetown	315
Nolan River at Blum	210	South Mayde Creek near Addicks	317
North Bosque River, at Hico	217	Spring Creek near Spring	38-40
at Valley Mills	220-223	Squaw Creek near Glen Rose	208-209
near Clifton	218-219	Squaw Creek Reservoir near Glen Rose	207
North Fork San Gabriel River, near Georgetown	280-281	Stillhouse Hollow Lake near Belton	276
upstream from State Highway 418 at Georgetown	315	Turkey Creek near Friendwood	318
Paluxy River at Glen Rose	205-206	Vince Bayou at Pasadena	128
Partial-record stations, crest-stage	317-318	Waco Lake near Waco	228-238
low-flow	315-316	West Fork San Jacinto River,	
Possum Kingdom Lake near Graford	197	above Lake Houston near Porter	36-37
Proctor Lake near Proctor	245	below Lake Conroe near Conroe	32-33
Sabana River near De Leon	244	near Conroe	34-35
Salt Fork Brazos River near Aspermont	160-161	Whiteoak Bayou, at Alabonson Road at Houston	317
San Bernard River Basin, gaging-stations records in	312-313	at Houston	96-99
San Bernard River near Boling	312-313	at Main Street, Houston	100-101
San Gabriel River, at Georgetown	315	Willow Creek near Tomball	317
at Laneport	286-287		
near Weir	316		